

DMS-DR-2167  
NASA CR-141,550

RESULTS OF INVESTIGATIONS ON AN 0.015-SCALE  
MODEL (49-0) OF THE ROCKWELL INTERNATIONAL  
SPACE SHUTTLE ORBITER IN THE NASA-AMES  
RESEARCH CENTER 3.5-FOOT HYPERSONIC  
WIND TUNNEL (0A98)

(NASA-CF-141550) RESULTS OF INVESTIGATIONS  
ON AN O.015-SCALE MODEL (49-0) OF THE  
FOCKWELL INTERNATIONAL SPACE SHUTTLE ORBITER  
IN THE NASA-AMES RESEARCH CENTER 3.5-FOOT  
HYPERSONIC WIND TUNNEL (0498) (Chrysler

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## SPACE SHUTTLE

# AEROTHERMODYNAMIC DATA REPORT



**JOHNSON SPACE CENTER**

**HOUSTON, TEXAS**

## DATA MANagement services

**SPACE DIVISION**

**CHRYSLER**  
CORPORATION

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WIND TUNNEL (OA98)

by

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by

Data Management Services  
Chrysler Corporation Space Division  
New Orleans, La. 70189

for

Engineering Analysis Division  
Johnson Space Center  
National Aeronautics and Space Administration  
Houston, Texas



WIND TUNNEL TEST SPECIFICS:

Test Number: ARC 3.5-190  
NASA Series Number: OA98  
Model Number: 49-0  
Test Dates: March 27 through April 3, 1974  
Occupancy Hours: 112

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ABSTRACT

This report presents the results of a wind tunnel test conducted in the Ames Research Center's 3.5 Foot Hypersonic Wind Tunnel from 27 March 1974 through 3 April 1974. The model used for this test was a 0.015-scale 140 A/B hybrid configuration of the Space Shuttle Orbiter.

The primary test objectives were to obtain incremental data on the effects of a sting mount on base pressures and force and moment data. The increments obtained included the addition of MPS nozzles as well as the deletion of the simulated sting mount.

Six-component aerodynamic force and moment data were recorded over an angle of attack range from  $12^\circ$  to  $42^\circ$  at  $0^\circ$  and  $5^\circ$  angles of sideslip. The testing was accomplished at Mach 5.3 and Mach 10.3. The effects of various elevon, body flap, and speed brake settings were investigated. Static pressures were measured at the fuselage base for use in force-data reduction.

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# NOMENCLATURE

## General

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
a		speed of sound; ft/sec
M	MACH	Mach number; $V/a$
q	Q(PSF)	dynamic pressure; $\rho V^2/2$ , psf
RN/L	RN/L	unit Reynolds number, per ft
V		velocity, ft/sec
$\alpha$	ALPHA	angle of attack, degrees
$\beta$	BETA	angle of sideslip, degrees
$\phi$	PHI	angle of roll, degrees
$\rho$	RHO	mass density, slugs/ft <sup>3</sup>

## Reference & C.G. Definitions

$A_b$		base area, ft <sup>2</sup>
b	BREF	wing span, ft
$l_{ref}$	LREF	reference length, ft
$\bar{c}$		mean aerodynamic chord, ft
S	SREF	wing area, ft <sup>2</sup>
c.g.		center of gravity
	MRP	moment reference point

## SUBSCRIPTS

b	base
l	local
s	static conditions
t	total conditions
$\infty$	free stream



# NOMENCLATURE (Continued)

## Body-Axis System

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
$C_N$	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
$C_A$	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
$C_Y$	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
$C_{A_b}$	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b - p_\infty)/qS$
$C_{A_f}$	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
$C_m$	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS \ell_{REF}}$
$C_n$	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
$C_\ell$	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$

## Stability-Axis System

$C_L$	CL	lift coefficient; $\frac{\text{lift}}{qS}$
$C_D$	CD	drag coefficient; $\frac{\text{drag}}{qS}$
$C_{D_b}$	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
$C_{D_f}$	CDF	forebody drag coefficient; $C_D - C_{D_b}$
$C_Y$	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
$C_m$	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS}$
$C_n$	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
$C_\ell$	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$

NOMENCLATURE (Continued)  
Additions to Standard List

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
$A_i$		area associated with $i$ th pressure, $\text{ft}^2$
$C_{A_T}$	CAT	total axial force coefficient
$C_{A_V}$	CAV	vertical tail strut base axial force coefficient
$C_{D_T}$	CDT	total drag coefficient
$C_{D_V}$	CDV	vertical tail strut base drag coefficient
$C_{L_f}$	CLF	forebody lift coefficient
$C_{L_T}$	CLT	total lift coefficient
$C_{L_V}$	CLV	vertical tail strut base lift coefficient
$C_{m_{\text{aft}}}$	CLMAFT	pitching moment coefficient based on aft c.g. location
$C_{m_{\text{fwd}}}$	CLMFWD	pitching moment coefficient based on forward c.g. location
$C_{m_T}$	CLMT	total pitching moment coefficient
$C_{N_T}$	CNT	total normal force coefficient
$C_{N_V}$	CNV	vertical tail strut base normal force coefficient
$C_{P_{B_i}}$	CPBi	base pressure coefficient at station $i$

# NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
FRL		fuselage reference line
IML		inner mold line
$l_B$	LB	fuselage length, in.
MRC		moment reference center
MS		model station, in.
OML		outer mold line
$P_T$	PT	freestream total pressure, psi
$P_O$	P	freestream static pressure, psi
$P_i$	P	local static pressure at orifice i, psi
$T_T$	TT	freestream total temperature, °R
$X_{MRP}$	XMRP	longitudinal location of moment reference point, in.
$X_O$	XO	Orbiter longitudinal station, in.
$Y_{MRP}$	YMRP	lateral location of moment reference point, in.
$Y_O$	YO	Orbiter lateral station, in.
$Z_{MRP}$	ZMRP	vertical location of moment reference point, in.
$Z_O$	ZO	Orbiter vertical station, in.
$\Delta C_A$	DCA	incremental axial force coefficient, difference between axial force coefficient of two runs
$\Delta C_{A_b}$	DCAB	incremental base axial force coefficient, difference between base axial force coefficient of two runs
$\Delta C_{A_f}$	DCAF	incremental forebody axial force coefficient, difference between forebody axial force coefficient of two runs

# NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
$\Delta C_D$	DCD	incremental drag coefficient, difference between drag coefficient of two runs
$\Delta C_L$	DCL	incremental lift coefficient, difference between lift coefficient of two runs
$\Delta C_\ell$	DCBL	incremental rolling moment coefficient, difference between rolling moment coefficient of two runs
$\Delta C_{m_{aft}}$	DCMAFT	incremental aft pitching moment coefficient, difference between aft pitching moment coefficient of two runs
$\Delta C_{m_{fwd}}$	DCMFWD	incremental forward pitching moment coefficient, difference between forward pitching moment coefficient of two runs
$\Delta C_N$	DCN	incremental normal force coefficient, difference between normal force coefficient of two runs
$\Delta C_n$	DCYN	incremental yawing moment coefficient, difference between yawing moment coefficient of two runs (body axis)
$\Delta C_Y$	DCY	incremental side force coefficient, difference between side force coefficient of two runs
$\delta_a$	AILRON	aileron deflection angle, degrees
$\delta_{BF}$	BDFLAP	bodyflap deflection angle, degrees
$\delta_e$	ELEVON	elevon deflection angle, degrees
$\delta_{e_L}$	ELEV-L	left-hand elevon deflection, inboard and outboard panels, degrees
$\delta_{e_R}$	ELEV-R	right-hand elevon deflection, inboard and outboard panels, degrees
$\delta_R$	RUDDER	rudder deflection angle, degrees

# NOMENCLATURE (Continued)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
$\delta_{SB}$	SPDBRK	speedbrake deflection angle, degrees
$\Lambda_u$		sweepback angle of speedbrake trailing edge, degrees
$\Lambda_L$		sweepback angle of the lower part of the vertical tail, degrees
$C_{m_V}$	CMVFWD	forward vertical tail base pitching-moment coefficient
$C_{N_V}$	CNV	vertical tail base normal-force coefficient
$C_{P_{V1}}$	CPV1	base pressure coefficient on upper speed brake portion
$C_{P_{V2}}$	CPV2	base pressure coefficient on lower speed brake portion
$C_{P_{V3}}$	CPV3	base pressure coefficient on lower vertical tail portion
$X_{V1}$		longitudinal distance from $0.65 \ell_B$ to centroid of area containing $C_{P_{V1}}$
$X_{V2}$		longitudinal distance from $0.65 \ell_B$ to centroid of area containing $C_{P_{V2}}$
$X_{V3}$		longitudinal distance from $0.65 \ell_B$ to centroid of area containing $C_{P_{V3}}$
$\Delta C_{D_V}$	DCDV	incremental vertical tail base drag force coefficient
$\Delta C_{D_f}$	DCDF	incremental total forebody drag force coefficient
$\Delta C_{D_t}$	DCDT	incremental total drag force coefficient

# NOMENCLATURE (Concluded)

<u>Symbol</u>	<u>Plot Symbol</u>	<u>Definition</u>
$C_{m_{t_f}}$	CMTFWD	forward total pitching moment coefficient
$C_{m_{t_a}}$	CMTAFT	aft total pitching moment coefficient
$C_{m_{V_f}}$	CMVAFT	aft vertical tail base pitching moment coefficient
$\Delta C_{L_t}$	DCLT	incremental total lift-force coefficient
$\Delta C_{L_V}$	DCLV	incremental vertical tail base lift force coefficient
$\Delta C_{D_b}$	DCDB	incremental model body base drag force coefficient
$\Delta C_{N_t}$	DCNT	incremental total normal force coefficient
$\Delta C_{N_V}$	DCNV	incremental vertical tail base normal-force coefficient
$\Delta C_{A_V}$	DCAV	incremental vertical tail base axial force coefficient
	DS	dummy sting
$A_{V_i}$		area associated with $i$ th pressure orifice on the vertical tail; $ft^2$ ; $i = 1, 2, 3$ (see fig. 2d and page 16)
$Z_{V_i}$		moment arm, measured along the $Z$ axis, from the $i$ th pressure orifice of the vertical tail to the ZMRP; inches; $i = 1, 2, 3$
$C_{p_c}$	CPCAV	pressure coefficient associated with the sting cavity area

## CONFIGURATIONS INVESTIGATED

The 140A/B hybrid configuration was tested with and without a dummy rear entry sting with two different OMS pod configurations.

Model 49-0 dimensional data are given for the 140A/B configuration in Table III.

The tested configuration included the following components:

<u>Component</u>	<u>Description</u>
B26	Basic 140A/B configuration fuselage
C9	Basic 140A/B configuration canopy
DS	Dummy sting
E37	Slotted elevons per model drawing SS-A00148
F8	Body flap per Rockwell Lines VL70-000145 (model drawing SS-A00147, release 12)
M7	Basic 140A/B configuration OMS/RCS pods
M14	Shortened configuration OMS/RCS pods per VL70-008457
N24	MPS Nozzles - N24
N28	Basic 140A/B configuration OMS engine nozzles
O11	B26C9E37F8M7N24N28R5V8W116
R5	Basic 140A/B configuration rudder for V8
V8	Basic 140A/B configuration vertical tail
W116	Basic 140A/B configuration wing

## TEST FACILITY DESCRIPTION

The NASA-Ames 3.5-Foot Hypersonic Wind Tunnel is a closed-circuit, blowdown-type tunnel capable of operating at nominal Mach numbers of 5, 7, and 10 at pressures to 1800 psia and temperatures to 3400°R for run times to four minutes. The major components of the facility include a gas storage system where the test gas is stored at 3000 psi, a storage heater filled with aluminum-oxide pebbles capable of heating the test gas to 3400°R, axisymmetric contoured nozzles with exit diameters of 42 inches for generating the desired Mach number, and a 900,000 ft<sup>3</sup> vacuum storage system which operates to pressures of 0.3 psia. The test section itself is an open-jet type enclosed within a chamber approximately 12-feet in diameter and 40-feet in length, arranged transversally to the flow direction.

A model support system is provided that can pitch models through an angle-of-attack range of -20 to +20 degrees, in a vertical plane, about a fixed point of rotation on the tunnel centerline. This rotation point is adjustable from 1 to 5 feet from the nozzle exit plane. The model normally is out of the test stream (strut centerline 37-inches from tunnel centerline) until the tunnel test conditions are established after which it is inserted. Insertion time is adjustable to as little as 1/2 second and models may be inserted at any strut angle.

A high-speed, analog-to-digital data acquisition system is used to record test data on magnetic tape. The present system is equipped to measure and record the outputs from 80 transducers in addition to 20 channels of tunnel parameters.



## DATA REDUCTION

Standard NASA/ARC data reduction techniques were used with the following reference dimensions:

$A_c$	Sting cavity area	0.0341 ft <sup>2</sup>
$b$	reference wing span	1.171 ft
$\bar{c}$	reference M.A.C.	0.5935 ft
$L_B$	reference body length	1.613 ft
$S$	reference wing area	0.6053 ft <sup>2</sup>
XMRP	longitudinal distance, model nose OML to moment reference center	12.6255 in
YMRP	lateral distance, plane of symmetry to moment reference center	0.0 in
ZMRP	vertical distance, FRP to moment reference center	-0.375 in

Fuselage and vertical tail base force coefficients were computed as follows:

$$C_{A_B} = - \frac{A_c C_{p_c}}{S} - \sum_{i=1}^5 \frac{A_{B_i} C_{p_{B_i}}}{S}$$

$C_{A_B}$  = base axial-force coefficient

$$C_{A_V} = - \frac{\cos \Lambda_u}{S} (A_{V1} C_{p_{V1}} + A_{V2} C_{p_{V2}}) - \frac{\cos \Lambda_L}{S} A_{V3} C_{p_{V3}}$$

$C_{A_V}$  = vertical tail base axial-force coefficient

$$C_{N_V} = \frac{\sin \Lambda_u}{S} (A_{V1} C_{p_{V1}} + A_{V2} C_{p_{V2}}) + \frac{\sin \Lambda_L}{S} (A_{V3} C_{p_{V3}})$$

# DATA REDUCTION (Continued)

$C_{N_V}$  = vertical tail base normal-force coefficient

$$C_{m_{V0.65}} \ell_B = - [A_{V1} C_{PV1} (Z_{V1} \cos \Lambda_u + X_{V1} \sin \Lambda_u) + A_{V2} C_{PV2} (Z_{V2} \cos \Lambda_u + X_{V2} \sin \Lambda_u) + A_{V3} C_{PV3} (Z_{V3} \cos \Lambda_L + X_{V3} \sin \Lambda_L)] / \bar{c} S$$

The following full scale dimensional values were utilized in effecting a solution to the above equations.

<u>Symbol</u>	<u>Dimensions</u>	<u>Value</u>
AB1	ft <sup>2</sup>	48.0
AB2	ft <sup>2</sup>	89.3
AB3	ft <sup>2</sup>	45.9
AB4	ft <sup>2</sup>	78.2
AB5	ft <sup>2</sup>	12.4
AC	ft <sup>2</sup>	151.56
XV1	in	581.1
XV2	in	531.9
XV3	in	432.2
ZV1	in	351.0
ZV2	in	251.1
ZV3	in	165.7
$\Lambda_u$	deg.	26.25°
$\Lambda_L$	deg.	63.85°

# DATA REDUCTION (Concluded)

The areas of influence applicable to the pressure coefficients in the above equations are a function of speedbrake deflection as defined in the following tabular array.

Symbol	Dimensions	Value	
		$\delta_{SB} = 55^\circ$	$\delta_{SB} = 85^\circ$
$A_{V1}$	ft <sup>2</sup>	50.4	82.3
$A_{V2}$	ft <sup>2</sup>	67.4	109.9
$A_{V3}$	ft <sup>2</sup>	19.77	19.77

The equations below define the relationships employed to obtain the indicated force coefficients.

$$CDV = CAV \cos \alpha + CNV \sin \alpha$$

$$CLV = CNV \cos \alpha - CAV \sin \alpha$$

$$CMVAFT = CMVFWD + (0.675 - 0.65) (\ell_B) CNV/\bar{c}$$

$$CLMAFT = CLMFWD + (0.675 - 0.65) (\ell_B) CN/\bar{c}$$

$$CDT = CD + CDV$$

$$CLT = CL + CLV$$

$$CAT = CA + CAV$$

$$CNT = CN + CNV$$

$$CMTFWD = CLMFWD + CMVFWD$$

$$CMTAFT = CLMAFT + CMVAFT$$

$$CAF = CAT - CAB$$

$$CDF = CAF \cos \alpha + CNT \sin \alpha$$

$$CDB = CDT - CDF$$

## RESULTS AND DISCUSSION

The model was installed in the tunnel on the ARC MK II 400565 D balance. The balance was attached to the W-11015 sting by means of a vertical tail blade strut. To determine sting effects, the model was tested with and without a dummy sting assembly installed between the tunnel support blade and the rear of the model. The dummy sting did not touch the model at any point.

The base pressure arrangement was varied with the test configuration. This was necessitated by a shortage of available transducer connections in the tunnel. These arrangements are shown on figure 2d.

Adapters were utilized on both stings to obtain  $\beta = 5^\circ$  for certain tests. During runs 8 and 9, the model was covered with impregnated oil and tested at a constant angle of attack to obtain flow patterns.

TABLE I.

[illegible]

TABLE II.

TEST: Ames 3.5-190 $\Phi A98$		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 03 AUGUST 1974		
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)					
		$\alpha$	$\beta$	$\delta_e$	$\delta_{oe}$	$\delta_{sr}$	$\delta_r$		5.3	10.3				
BAEQ001	011-M7+M14	A	0	0	-11.7	55	0	2	1	25				
02				-10					2	24				
03				-40					3	23				
04				0		85		1	4					
05					16.3	55				27				
06					0					28				
07			5		-11.7					29				
08			5	-40						30				
09	-N24		0	0				2	5	20				
10				-10					6	21				
11				-40					7	22				
12			5					1		31				
13	+DS		0	0				2	13	14				
14				-10				1	11					
15				-40					10					
16				0		85			12					
R SETS:														
CN	ICY	ICA	ICLM	ICYN	ICBL	ICL	CD					MACH	ALPHA	18
A SETS:														
CPB1	CPB2	CPB3	CPB4	CPBAY	CPB5	CPV3	CPV2	CPV1				MACH	ALPHA	19
TYPE OF DATA		A: 12, 16, 20, 24, 28, 32, 36, 40, 42							COEFFICIENT SCHEDULES					
$\alpha$ OR $\beta$									IDVAR (1)	IDVAR (2)	IDV			
SCHEDULES														

TABLE II. Concluded

TEST: Ames 3.5-190 $\phi$ A98		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE: 03 August 1974	
DATA SET IDENTIFIER	CONFIGURATION	SCHD. PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)				TEST RUN NUMBERS		
		$\alpha$	$\beta$	$\delta_e$	$\delta_{BE}$		$\delta_{SB}$	$\delta_R$	5.3	10.3			
RAEQ017	011-M7+M14-N24+DS	A	0	0	-11.7	55	0	2	34	17			
18				-10					36	15			
19				-40					37	16			
20				0		85			35				
21						16.3	55			18			
22						0				19			
23			5		-11.7					33			
24			5	-40						32			
RSETS:													
CN	CY	CA	CLM	CYN	CBL	CL	CD			MACH	ALPHA	18	
ASSETS:													
CPB1	CPB2	CPB3	CPB4	CPB5	CPB6	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB13	
TYPE OF DATA													
$\alpha$ OR $\beta$ A: 12, 16, 20, 24, 28, 32, 36, 40, 42 COEFFICIENT SCHEDULES SCHEDULES													
IDVAR (1) IDVAR (2) NDV MACH ALPHA 19													

TABLE III MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY - B<sub>26</sub>

GENERAL DESCRIPTION : Configuration 140 A/B orbiter fuselage

NOTE: B<sub>26</sub> is identical to B<sub>24</sub> except underside of fuselage has been  
refaired to accept W<sub>116</sub>.

MODEL SCALE: 0.015      MODEL DWG: SS-A00147, Release 12

DRAWING NUMBER : VL70-000143B, -000200, -000205, -006089,  
-000145, -000140A, -000140B

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OML: Fwd Sta $X_o = 235$ ), In.	1293.3	19.400
Length (IML: Fwd Sta. $X_o = 238$ ), In.	1290.3	19.355
Max Width (At $X_o = 1528.3$ ), In.	264.0	3.960
Max Depth (At $X_o = 1464$ ), In.	250.0	3.750
Fineness Ratio	0.264	0.264
Area - Ft <sup>2</sup>		
Max. Cross-Sectional	340.88	0.077
Planform		
Wetted		
Base		



TABLE III (Cont'd)

MODEL COMPONENT : CANOPY - C<sub>9</sub>GENERAL DESCRIPTION : Configuration 3A. Canopy used with fuselage B<sub>26</sub>.MODEL SCALE: 0.015MODEL DWG: SS-A00147, Release 12DRAWING NUMBER: VL70-000143A

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length ( $X_o = 434.643-578$ ), In.	<u>143.357</u>	<u>2.150</u>
Max Width (At $X_o = 513.127$ ), In.	<u>152.412</u>	<u>2.286</u>
Max Depth (At $X_o = 485.0$ ), In.	<u>25.000</u>	<u>0.375</u>
Fineness Ratio	<u>                    </u>	<u>                    </u>
Area	<u>                    </u>	<u>                    </u>
Max. Cross-Sectional	<u>                    </u>	<u>                    </u>
Planform	<u>                    </u>	<u>                    </u>
Wetted	<u>                    </u>	<u>                    </u>
Base	<u>                    </u>	<u>                    </u>

TABLE III (Cont'd)

MODEL COMPONENT: ELEVON - E<sub>37</sub>GENERAL DESCRIPTION: Configuration 140A/B orbiter elevonE<sub>37</sub> is a slotted version of E<sub>26</sub>. Data is for one side.MODEL SCALE: 0.015MODEL DWG: SS-A00147, Release 12DRAWING NUMBER: VL70-000200, -006089, -006092DIMENSIONS:

	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft <sup>2</sup>	<u>210.00</u>	<u>0.0473</u>
Span (equivalent), In.	<u>349.2</u>	<u>5.238</u>
Inb'd equivalent chord, In.	<u>118.004</u>	<u>1.770</u>
Outb'd equivalent chord, In.	<u>55.192</u>	<u>0.828</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.2096</u>	<u>0.2096</u>
At Outb'd equiv. chord	<u>0.4004</u>	<u>0.4004</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.00</u>	<u>0.00</u>
Tailing Edge	<u>-10.056</u>	<u>-10.056</u>
Hingeline (Product of Area and $\bar{c}$ )	<u>0.00</u>	<u>0.00</u>
Area Moment ( <del>Normal to hingeline</del> ), Ft <sup>3</sup>	<u>1587.25</u>	<u>0.00536</u>
Mean Aerodynamic Chord, In.	90.7	1.361

TABLE III (Cont'd)

MODEL COMPONENT : BODY FLAP - F<sub>g</sub>GENERAL DESCRIPTION : Configuration 140A/B orbiter body flapHingeline located at X<sub>o</sub> = 1528.3, Z<sub>o</sub> = 284.3MODEL SCALE: 0.015 MODEL DWG: SS-A00147, Rel. 12DRAWING NUMBER : VL70-000140A, -000145

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X <sub>o</sub> = 1520 to 1613), In.	<u>93.00</u>	<u>1.395</u>
Max Width, In.	<u>262.00</u>	<u>3.930</u>
Max Depth (X <sub>o</sub> = 1520), In.	<u>23.00</u>	<u>0.345</u>
Fineness Ratio	<u>          </u>	<u>          </u>
Area - Ft <sup>2</sup>	<u>          </u>	<u>          </u>
Max. Cross-Sectional	<u>          </u>	<u>          </u>
Planform	<u>150.525</u>	<u>0.0339</u>
Wetted	<u>          </u>	<u>          </u>
Base	<u>41.847</u>	<u>0.0094</u>

TABLE III (Cont'd)

MODEL COMPONENT : OMS PODS - M<sub>7</sub>

GENERAL DESCRIPTION : Configuration 140A/B orbiter OMS/RCS pods

\_\_\_\_\_

\_\_\_\_\_

MODEL SCALE: 0.015 MODEL DWG: SS-A00147, Rel. 12

DRAWING NUMBER : VL70-000145

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta $X_O = 12330.$ )	<u>327.00</u>	<u>4.905</u>
Max Width (At $X_O = 1450$ ), In.	<u>94.50</u>	<u>1.418</u>
Max Depth (At $X_O = 1493$ ), In.	<u>109.000</u>	<u>1.635</u>
Fineness Ratio	<u>                    </u>	<u>                    </u>
Area	<u>                    </u>	<u>                    </u>
Max. Cross-Sectional	<u>                    </u>	<u>                    </u>
Planform	<u>                    </u>	<u>                    </u>
Wetted	<u>                    </u>	<u>                    </u>
Base	<u>                    </u>	<u>                    </u>

TABLE III (Cont'd)

MODEL COMPONENT : OMS POD - M<sub>14</sub>GENERAL DESCRIPTION : Preliminary IML version of short OMS  
pod. (First used on 0.015 scale Model 36-O for test No. OA83.)MODEL SCALE: 0.015DRAWING NUMBER : VL70-008457

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length(OMS Fwd Sta $X_o = 1311$ ), In.	<u>254.00</u>	<u>3.810</u>
Max Width (At $X_o = 1511$ ), In.	<u>135.6</u>	<u>2.034</u>
Max Depth (At $X_o = 1511$ ), In.	<u>73.6</u>	<u>1.104</u>
Finessess Ratio	<u>2.541</u>	<u>2.541</u>
Area - Ft <sup>2</sup>	<u>          </u>	<u>          </u>
Max. Cross-Sectional	<u>54.507</u>	<u>0.012</u>
Planform	<u>          </u>	<u>          </u>
Wetted	<u>          </u>	<u>          </u>
Base	<u>          </u>	<u>          </u>

TABLE III (Cont'd)

MODEL COMPONENT: MPS NOZZLES - N 24GENERAL DESCRIPTION: Configuration 140A/B orbiter MPS nozzles.MODEL SCALE: 0.015MODEL DRAWING: SS-A00147, Release 12DRAWING NUMBER: VL70-005030A, VL70-000140A

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
MACH NO.		
Length - In.		
Gimbal Point to Exit Plane	<u>157.0</u>	<u>2.355</u>
Throat to Exit Plane	<u>99.2</u>	<u>1.488</u>
Diameter - In.		
Exit	<u>91.00</u>	<u>1.410</u>
Throat	<u>          </u>	<u>          </u>
Inlet	<u>          </u>	<u>          </u>
Area - ft <sup>2</sup>		
Exit	<u>45.166</u>	<u>0.0102</u>
Throat	<u>          </u>	<u>          </u>
Gimbal Point (Station) - In.		
Upper Nozzle		
X	<u>1445.00</u>	<u>23.675</u>
Y	<u>0.0</u>	<u>0.0</u>
Z	<u>443.0</u>	<u>6.645</u>
Lower Nozzles		
X	<u>1468.17</u>	<u>22.023</u>
Y	<u>53.00</u>	<u>0.795</u>
Z	<u>342.640</u>	<u>5.140</u>
Null Position - Deg.		
Upper Nozzle		
Pitch	<u>16</u>	<u>16</u>
Yaw	<u>0</u>	<u>0</u>
Lower Nozzle		
Pitch	<u>10</u>	<u>10</u>
Yaw	<u>3.5</u>	<u>3.5</u>

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TABLE III (Cont'd)

MODEL COMPONENT: OMS NOZZLES - N<sub>28</sub>GENERAL DESCRIPTION: Configuration 140A/B orbiter OMS nozzles.MODEL SCALE: 0.015DRAWING NUMBER: VL70-000140A (Location), SS-A00106, Rel. 5 (Contour)

DIMENSIONS:		<u>FULL SCALE</u>	<u>MODEL SCALE</u>
MACH NO.			
Length - In.			
Gimbal Point to Exit Plane			
Throat to Exit Plane			
Diameter - In.			
Exit			
Throat			
Inlet			
Area - ft <sup>2</sup>			
Exit			
Throat			
Gimbal Point (Station) - In.			
Left	<del>Upper</del> Nozzle		
	X <sub>o</sub>	1518.0	22.770
	Y <sub>o</sub>	- 88.0	-1.320
	Z <sub>o</sub>	492.0	7.380
Right	<del>Lower</del> Nozzles		
	X <sub>o</sub>	1518.00	22.770
	Y <sub>o</sub>	88.0	1.320
	Z <sub>o</sub>	492.0	7.380
Null Position - Deg.			
Left	<del>Upper</del> Nozzle		
	Pitch	±8°	±8°
	Yaw		
	Outboard	13°17'	13°17' Outboard
	Inboard	2°30'	2°30' Inboard
Right	<del>Lower</del> Nozzle		
	Pitch	±8°	±8°
	Yaw		
	Outboard	13°17'	13°17' Outboard
	Inboard	2°30'	2°30' Inboard

TABLE III (Cont'd)

MODEL COMPONENT: RUDDER - R<sub>5</sub>GENERAL DESCRIPTION: Configuration 140C orbiter rudder (Identical to configuration 140A/B rudder)MODEL SCALE: 0.015DRAWING NUMBER: VL70-000146B, -000095

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - Ft <sup>2</sup>	<u>100.15</u>	<u>0.023</u>
Span (equivalent), In.	<u>201.00</u>	<u>3.015</u>
Inb'd equivalent chord, In.	<u>91.585</u>	<u>1.374</u>
Outb'd equivalent chord, In.	<u>50.833</u>	<u>0.762</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>        </u>	<u>        </u>
Tailing Edge	<u>26.25</u>	<u>26.25</u>
Hingeline (Product of area & $\bar{c}$ )	<u>34.83</u>	<u>34.83</u>
Area Moment (Normal to hingeline), Ft <sup>3</sup>	<u>610.92</u>	<u>0.00021</u>
Mean Aerodynamic Chord, In.	<u>73.2</u>	<u>1.098</u>



TABLE III (Cont'd)

MODEL COMPONENT: VERTICAL - V<sub>8</sub>GENERAL DESCRIPTION: Configuration 140C orbiter vertical tail(identical to configuration 140A/B vertical tail).MODEL SCALE: 0.015DRAWING NUMBER: VL70-000140C, -000146BDIMENSIONS: FULL SCALE MODEL SCALE

## TOTAL DATA

Area (Theo) - Ft <sup>2</sup>		
Planform	<u>413.253</u>	<u>0.093</u>
Span (Theo) - In.	<u>315.72</u>	<u>4.736</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.404</u>	<u>0.404</u>
Sweep-Back Angles, Degrees.		
Leading Edge	<u>45.00</u>	<u>45.000</u>
Trailing Edge	<u>26.25</u>	<u>26.250</u>
0.25 Element Line	<u>41.13</u>	<u>41.13</u>
Chords:		
Root (Theo) WP	<u>268.50</u>	<u>4.028</u>
Tip (Theo) WP	<u>108.47</u>	<u>1.627</u>
MAC	<u>199.81</u>	<u>2.997</u>
Fus. Sta. of .25 MAC	<u>1463.35</u>	<u>21.950</u>
W.P. of .25 MAC	<u>635.52</u>	<u>9.533</u>
B.L. of .25 MAC	<u>0.00</u>	<u>0.00</u>
Airfoil Section		
Leading Wedge Angle - Deg.	<u>10.00</u>	<u>10.00</u>
Trailing Wedge Angle - Deg.	<u>14.92</u>	<u>14.92</u>
Leading Edge Radius	<u>2.00</u>	<u>0.030</u>
Void Area	<u>13.17</u>	<u>0.00296</u>
Blanketed Area	<u>0.0</u>	<u>0.0</u>

TABLE III (CONL'D)

MODEL COMPONENT: WING-W<sub>116</sub>GENERAL DESCRIPTION: Configuration 4

NOTE: Identical to W<sub>114</sub> except airfoil thickness. Dihedral angle is along  
trailing edge of wing. Geometric twist = 0.

MODEL SCALE: 0.015

TEST NO.

DWG. NO. VL70-000140A, -000200DIMENSIONS:FULL-SCALEMODEL SCALETOTAL DATAArea (Theo.) Ft<sup>2</sup>

Planform

2690.00

0.605

Span (Theo. In.

936.68

14.050

Aspect Ratio

2.265

2.265

Rate of Taper

1.177

1.177

Taper Ratio

0.200

0.200

Dihedral Angle, degrees

3.500

3.500

Incidence Angle, degrees

0.500

0.500

Aerodynamic Twist, degrees

Sweep Back Angles, degrees

Leading Edge

45.000

45.000

Trailing Edge

- 10.056

- 10.056

0.25 Element Line

35.209

35.209

## Chords:

Root (Theo) B.P.O.O.

689.24

10.339

Tip, (Theo) B.P.

137.85

2.068

MAC

474.81

7.122

Fus. Sta. of .25 MAC

1136.83

17.052

W.P. of .25 MAC

290.58

4.359

B.L. of .25 MAC

182.13

2.732

EXPOSED DATAArea (Theo) Ft<sup>2</sup>

1751.50

0.394

Span, (Theo) In. BP108

720.68

10.810

Aspect Ratio

2.059

2.059

Taper Ratio

0.245

0.245

## Chords

Root BP108

562.09

8.431

Tip 1.00  $\frac{b}{2}$ 

137.85

2.068

MAC

392.83

5.892

Fus. Sta. of .25 MAC

1185.98

17.790

W.P. of .25 MAC

294.30

4.415

B.L. of .25 MAC

251.77

3.777

Airfoil Section (Rockwell Mod NASA)

XXXX-64

Root  $\frac{t}{c}$  =

0.113

0.113

Tip  $\frac{t}{c}$  =

0.120

0.120

Data for (1) of (2) Sides

Leading Edge Cuff 2Planform Area Ft<sup>2</sup>

113.18

0.025

Leading Edge Intersects Fus M. L. @ Sta

500.00

7.50

Leading Edge Intersects Wing @ Sta

1024.0

15.36

TABLE IV  
DATASET COMBINATIONS USED TO OBTAIN INCREMENTAL DATA

RESULTING DATASET	MINUEND DATASET	SUBTRAHEND DATASET	RESULTING DATA	$\beta$	$\delta_e$	$\delta_{BF}$	$\delta_{SB}$
1, Z, YEQ009	REQ009	REQ001	Nozzle increment	0	0	-11.7	55
10	REQ010	REQ002	Nozzle increment	0	-10	-11.7	55
11	REQ011	REQ003	Nozzle increment	0	-40	-11.7	55
12	REQ012	REQ008	Nozzle increment	5	-40	-11.7	55
1, Z, YEQ017	REQ017	REQ001	Nozzle increment	0	0	-11.7	55
18	REQ018	REQ002	+ sting tare	0	-10	-11.7	55
19	REQ019	REQ003		0	-40	-11.7	55
20	REQ020	REQ004		0	0	-11.7	85
21	REQ021	REQ005		0	0	16.3	55
22	REQ022	REQ006		0	0	0	55
23	REQ023	REQ007		5	0	-11.7	55
24	REQ024	REQ008		5	-40	-11.7	55
3EQ007	REQ007	REQ001	Increment due	$\Delta=5$	0	-11.7	55
08	REQ008	REQ003	to 5° sideslip	$\Delta=5$	-40	-11.7	55
23	REQ023	REQ017		$\Delta=5$	0	-11.7	55
24	REQ024	REQ019		$\Delta=5$	-40	-11.7	55
12	REQ012	REQ011		$\Delta=5$	-40	-11.7	55

NOTE:

- VERTICAL TAIL REPLACED WITH NON-METRIC BLADE STRUT. INCREMENTAL FORCES ON VERTICAL TAIL ESTIMATED FROM PRESSURES RECORDED IN SPEEDBRAKE BASE REGION.
- [NOZZLE INCREMENT] = [MODEL + STRUT] - [MODEL + STRUT + NOZZLE]
- [NOZZLE INCREMENT + STING TARE] = [MODEL + STRUT + DUMMY STING] - [MODEL + STRUT + NOZZLE]
- [SIDESLIP INCREMENT] = [ $\beta = 5^\circ$ ] - [ $\beta = 0$ ]

# Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

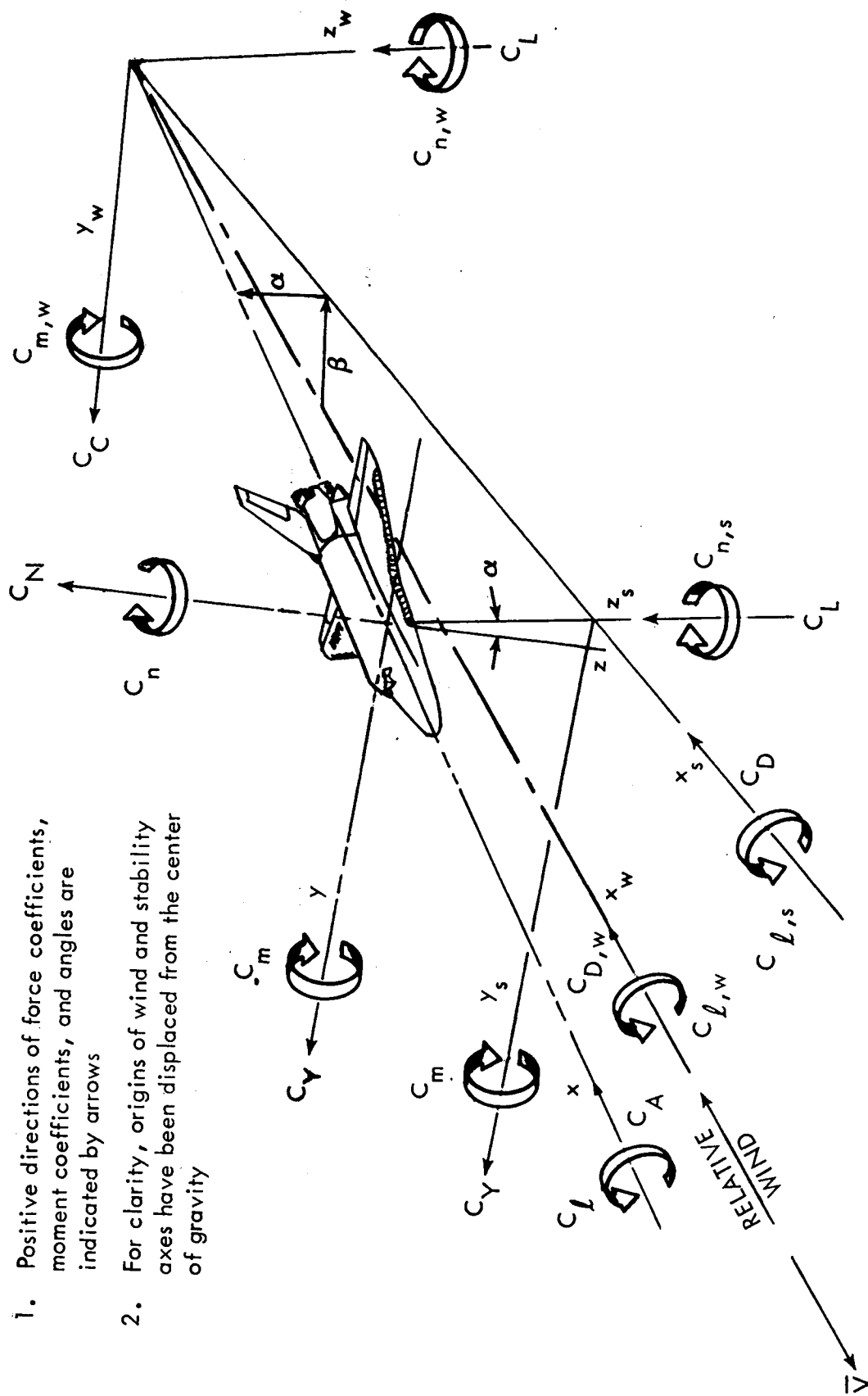
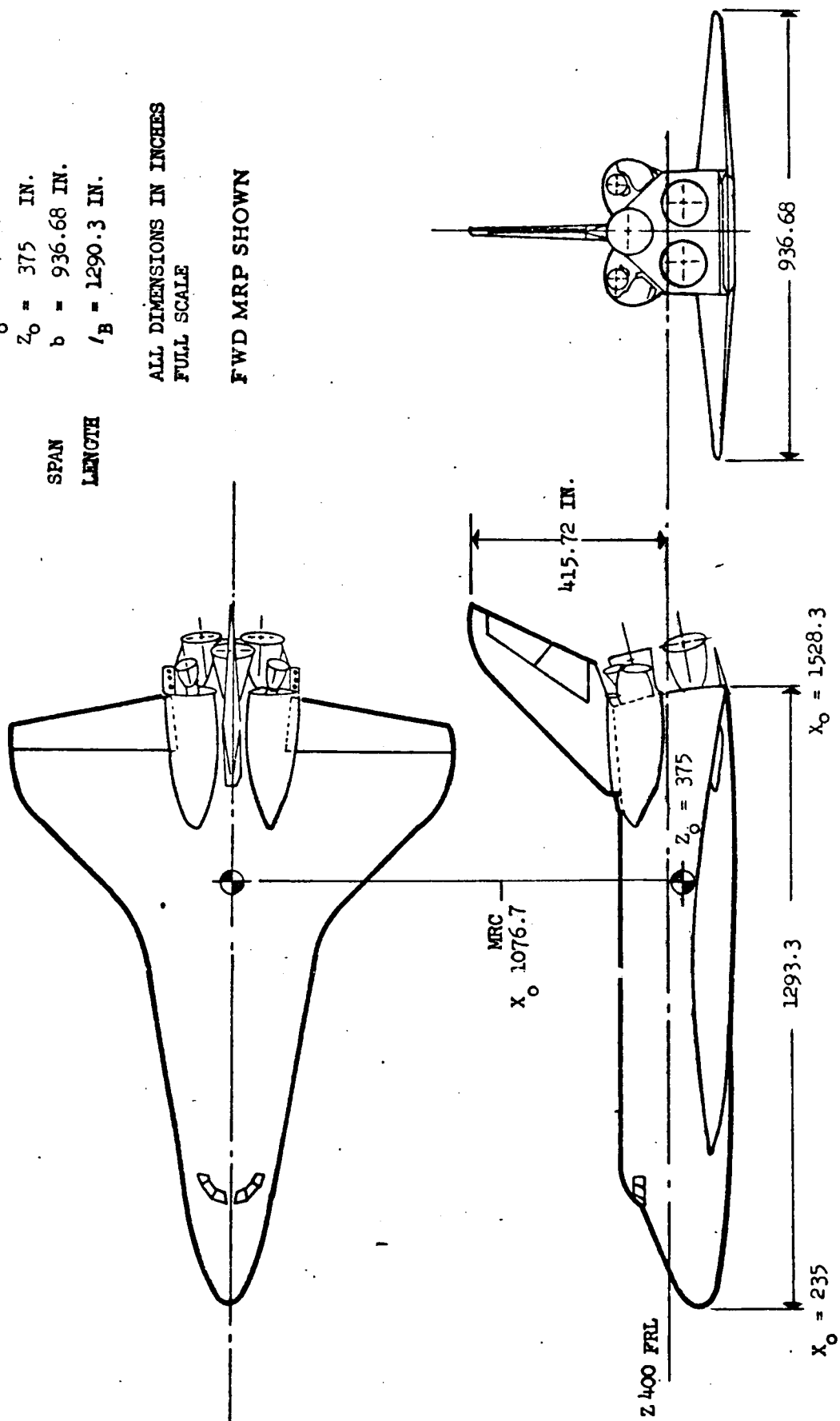


Figure 1. - Axis systems.

REFERENCE	DIMENSIONS
AREA	$S = 2690 \text{ FT}^2$
MAC	$\bar{C} = 474.8 \text{ IN.}$
C.G.	$X_O = 1076.7 \text{ IN.}$
	$Z_O = 375 \text{ IN.}$
SPAN	$b = 936.68 \text{ IN.}$
LENGTH	$L_B = 1290.3 \text{ IN.}$

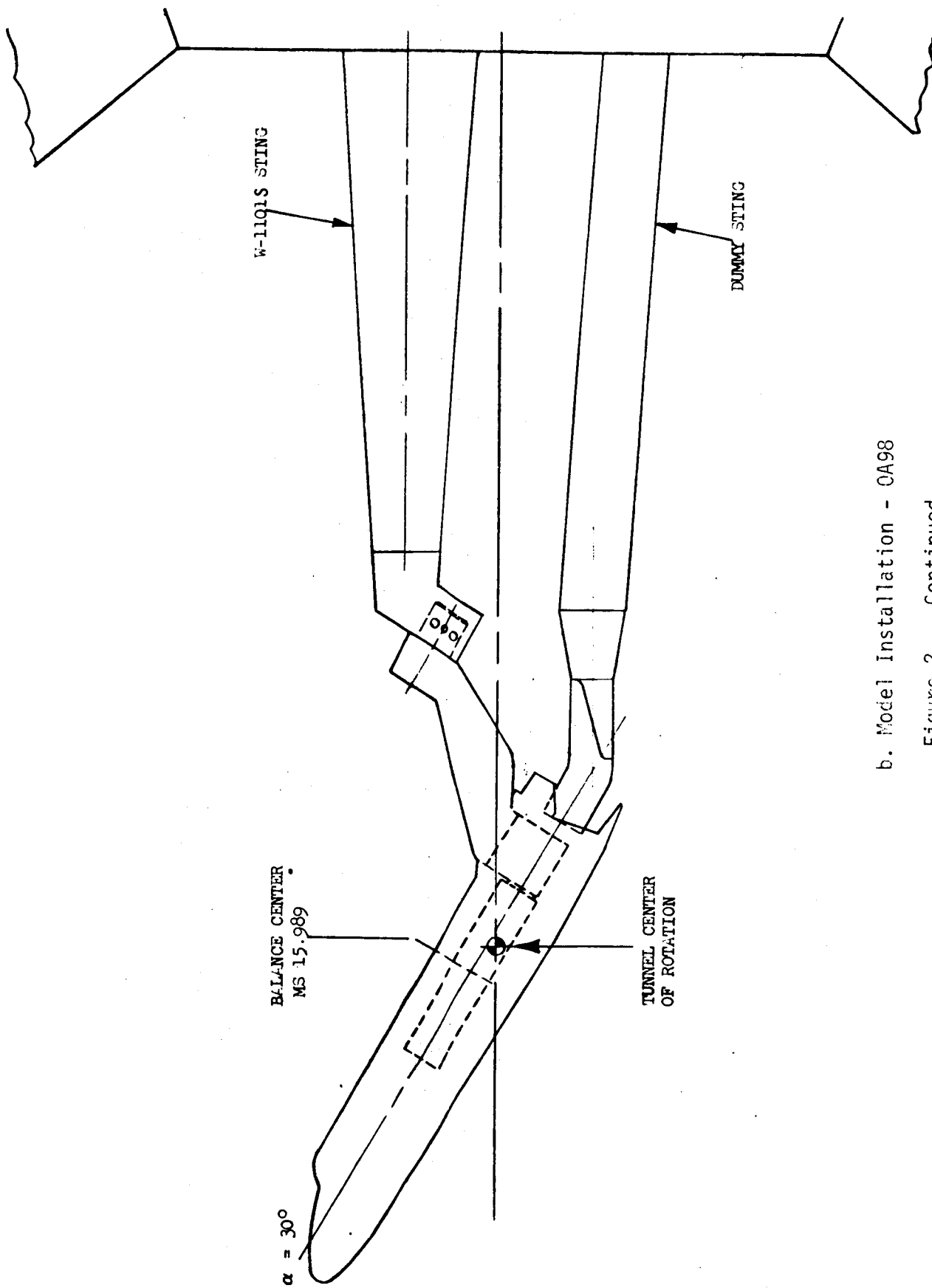
ALL DIMENSIONS IN INCHES  
FULL SCALE

FWD MRP SHOWN



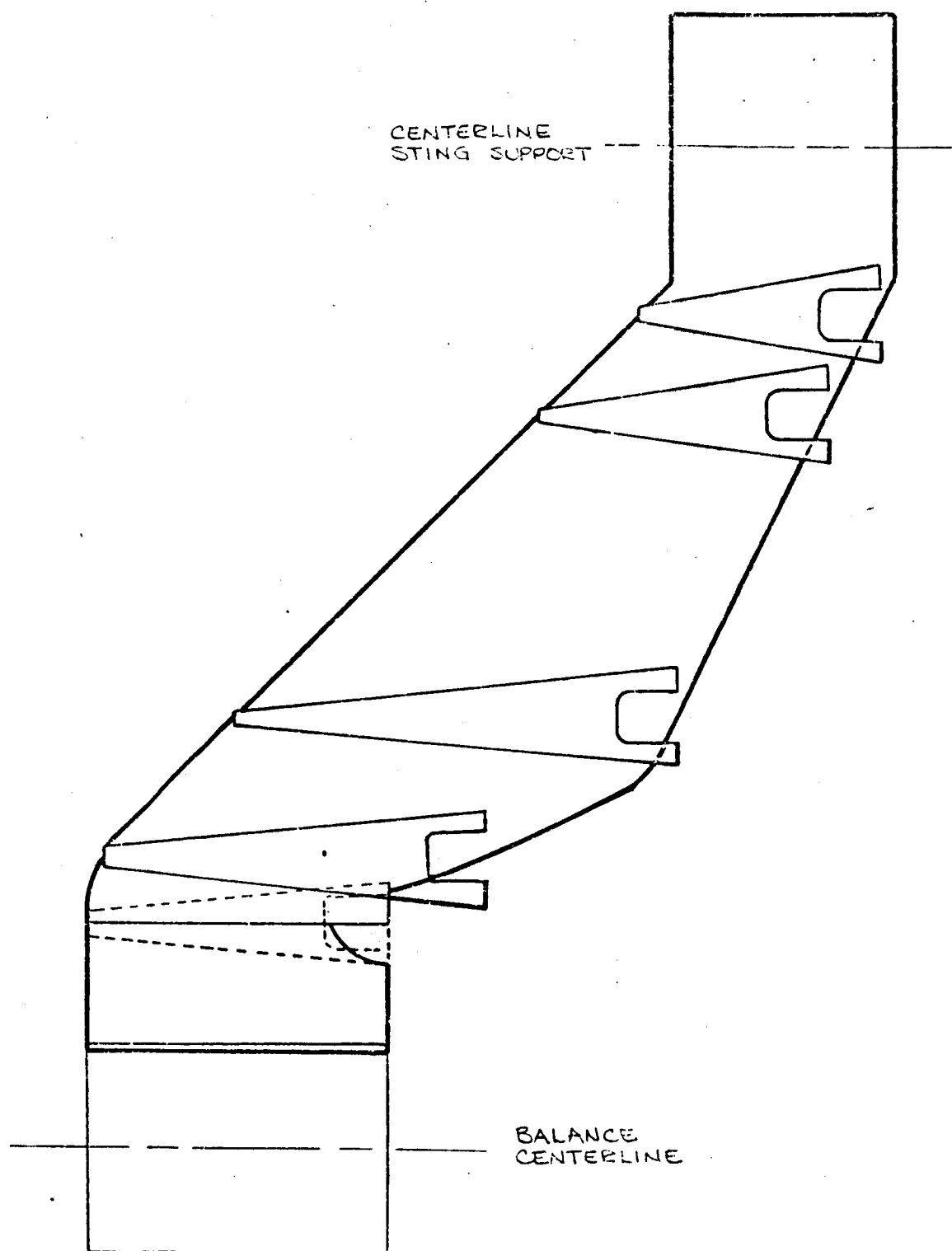
a. SSV Orbiter Configuration 14CA/B

Figure 2. - Model sketches.



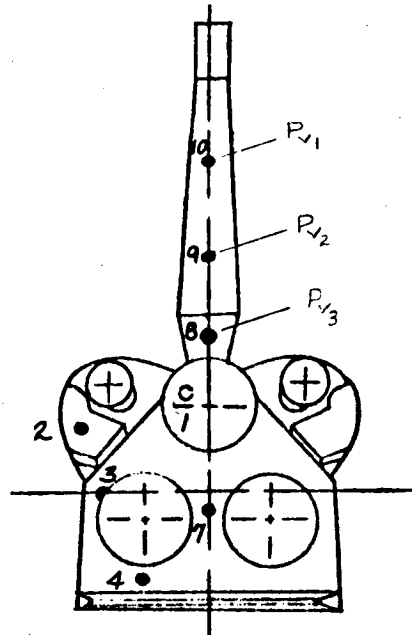
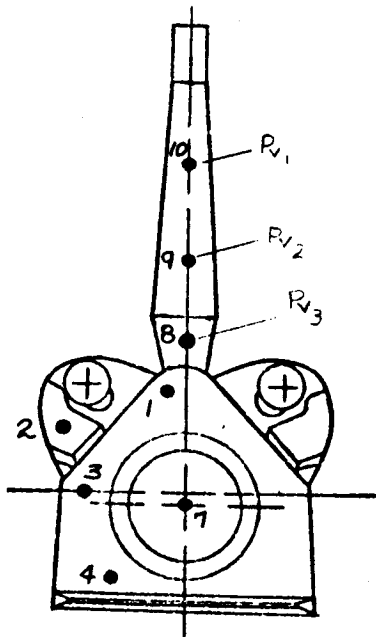
b. Model Installation - OA98

Figure 2. - Continued.



c. Vertical Tail Sting Strut

Figure 2. - Continued.



### STRUT MOUNT DUMMY STING IN

- 3 VERTICAL TAIL BASE (8,9,10)
- 1 OMS POD BASE (2)
- 3 FUSELAGE BASE (1,3,4)
- 1 STING CAVITY BASE (7)
- 1 BALANCE CAVITY (5)
- 1 STRUT CLEARANCE SLOT (11)

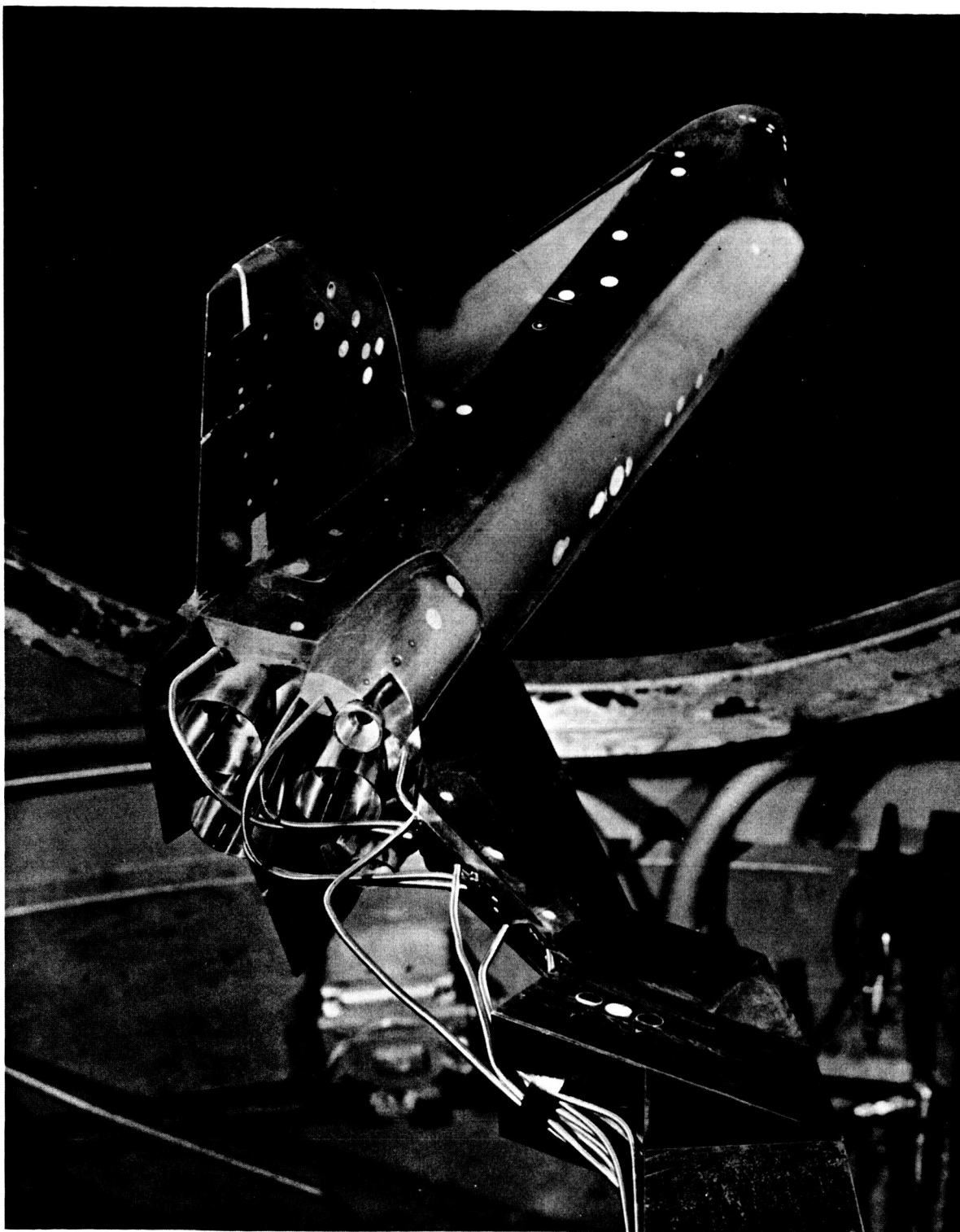
### STRUT MOUNT DUMMY STING OUT

- 3 VERTICAL TAIL BASE (8,9,10)
- 1 OMS POD BASE (2)
- 4 FUSELAGE BASE (1,3,4,7)
- 1 BALANCE CAVITY (5)
- 1 STRUT CLEARANCE SLOT (11)

d. Base and Cavity Pressure Locations

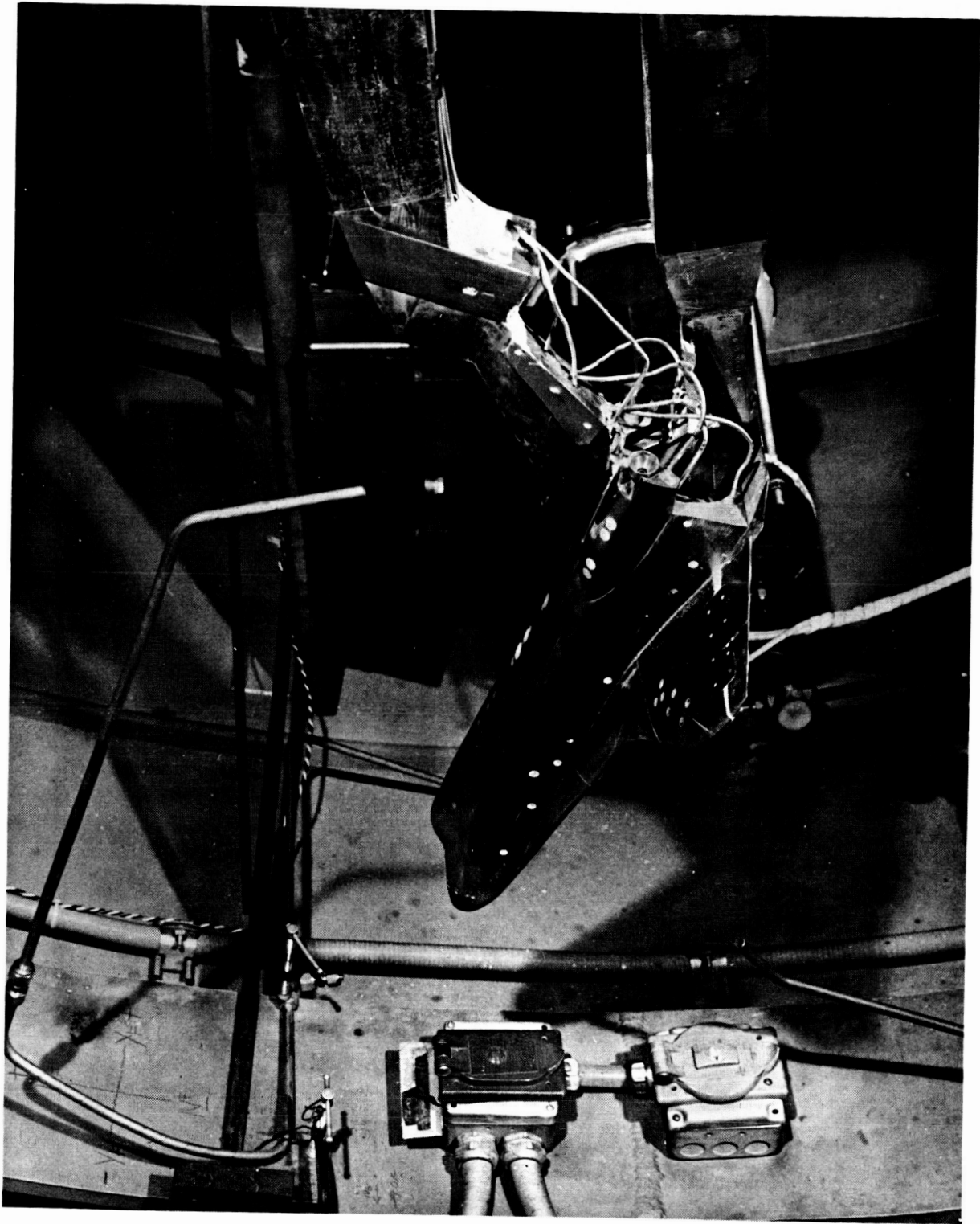
Figure 2. - Concluded.





a. Installation With Dummy Sting Out

Figure 3. - Model installation photographs.



b. Installation With Dummy Sting In

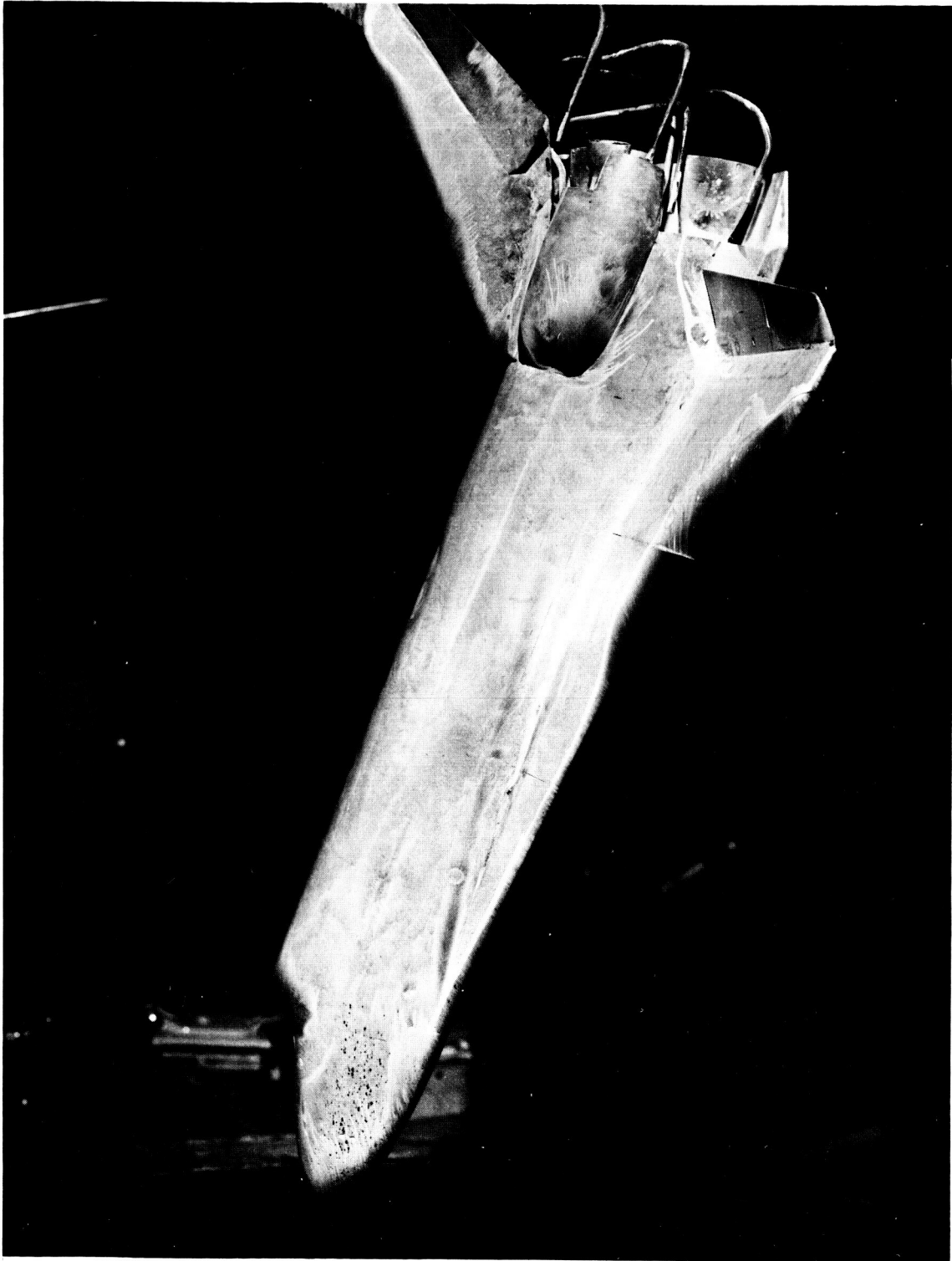
Figure 3. - Continued

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c. Model With Basic M<sub>7</sub> OMS Pod

Figure 3. - Continued.



d. Model With Shortened  $M_{14}$  OMS Pod

Figure 3. - Concluded.

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (CE0001) AMES 3.5-190 0A98 (011-M7-M14)  
 (CE0002) AMES 3.5-190 0A98 (011-M7-M14)  
 (CE0003) AMES 3.5-190 0A98 (011-M7-M14)

BETA ELEVON BOFLAP SPOBRK  
 .000 .000 -11.700 55.000  
 .000 -10.000 -11.700 55.000  
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

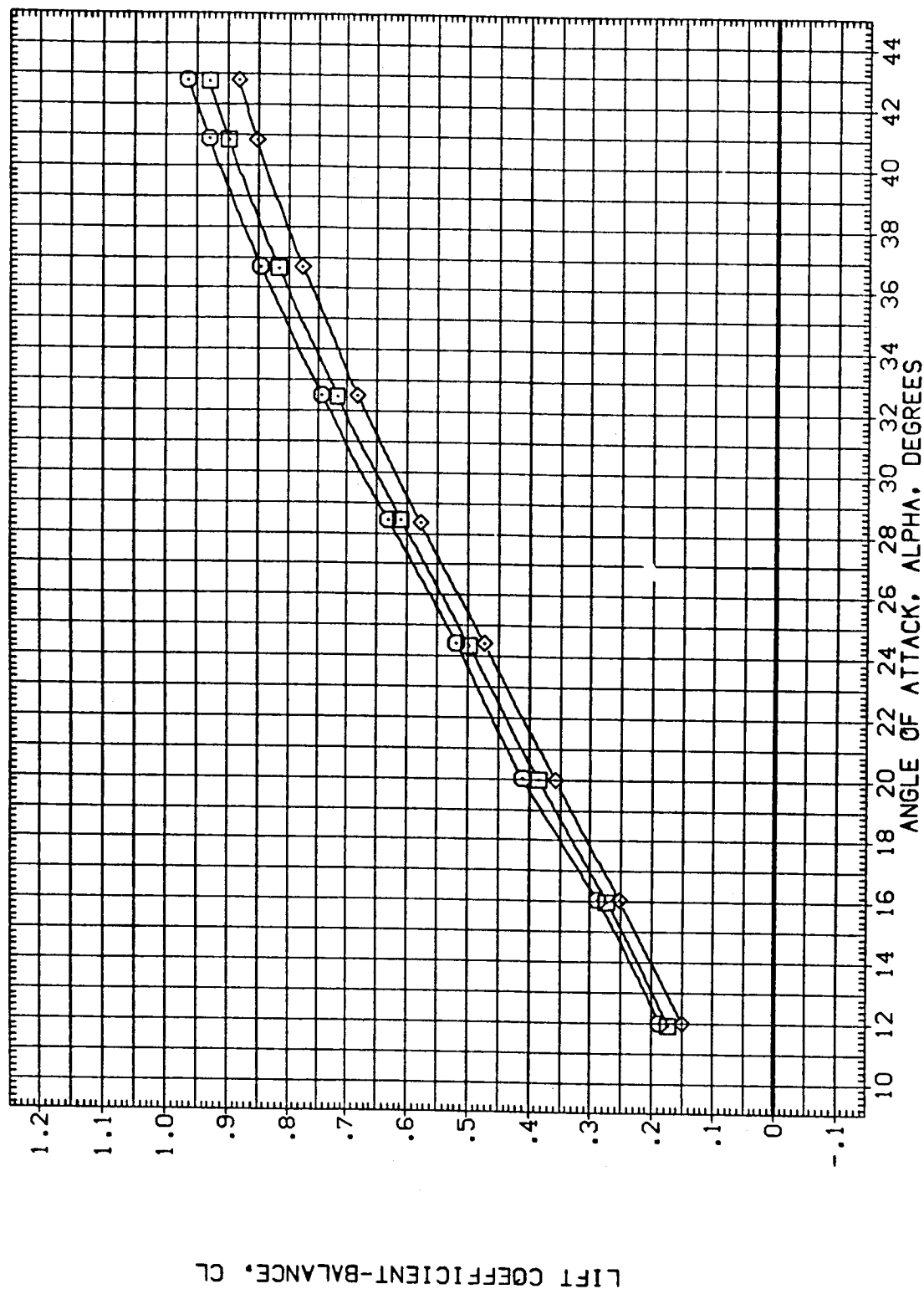


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0001) AMES 3.5-190 0A98 (011-M7+M14)

(CE0002) AMES 3.5-190 0A98 (011-M7+M14)

(CE0003) AMES 3.5-190 0A98 (011-M7+M14)

BETA .000 .000 .000

ELEVON .000 .000 .000

BOFLAP -11.700 -11.700 -11.700

SPDBRK 55.000 55.000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

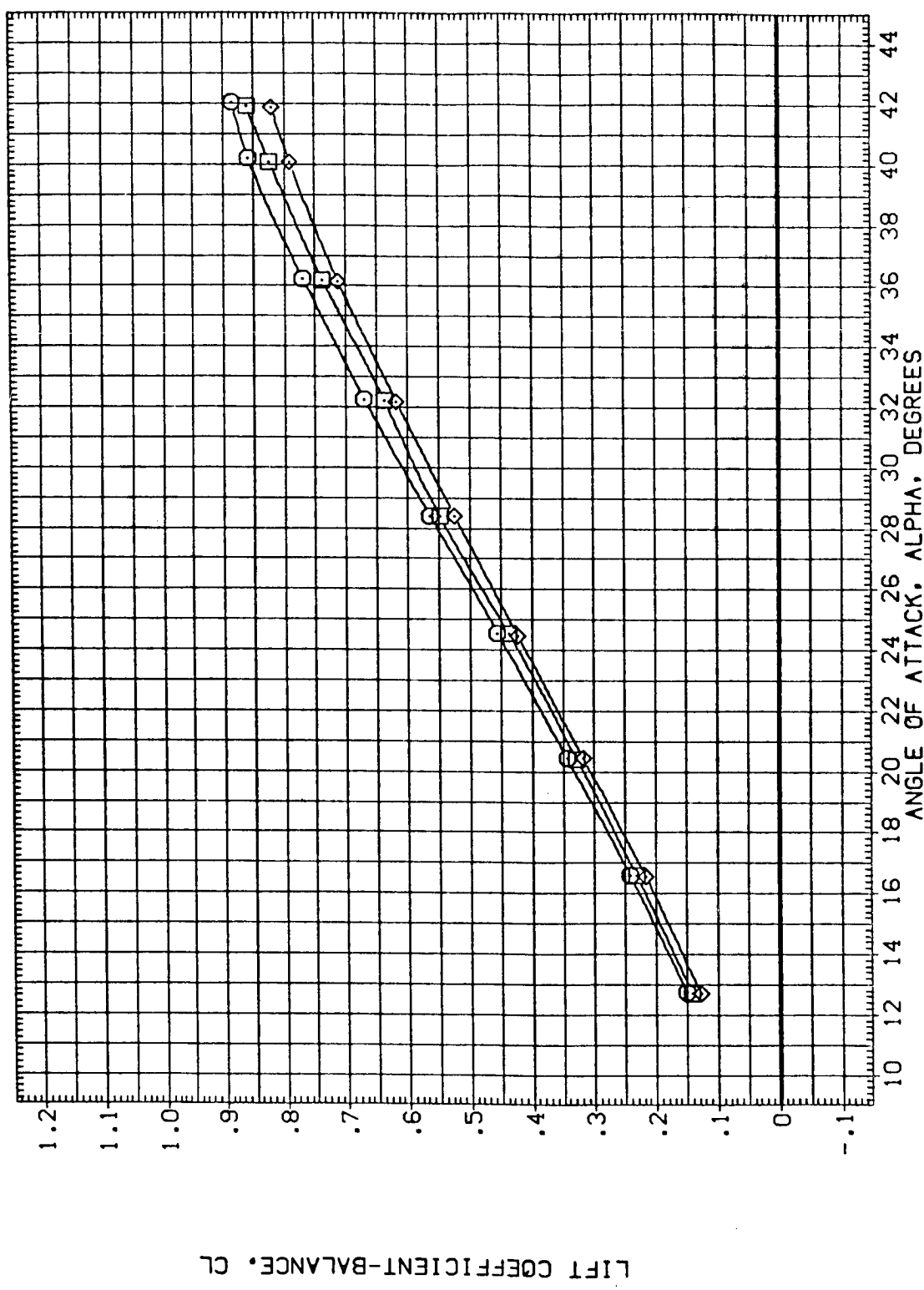


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL      CONFIGURATION DESCRIPTION  
 (CE0001)      AVES 3.5-190 0A98 (011-M7+M14)  
 (CE0002)      AVES 3.5-190 0A98 (011-M7+M14)  
 (CE0003)      AVES 3.5-190 0A98 (011-M7+M14)

BETA      ELEVON      BOFLAP      SPOBRK

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

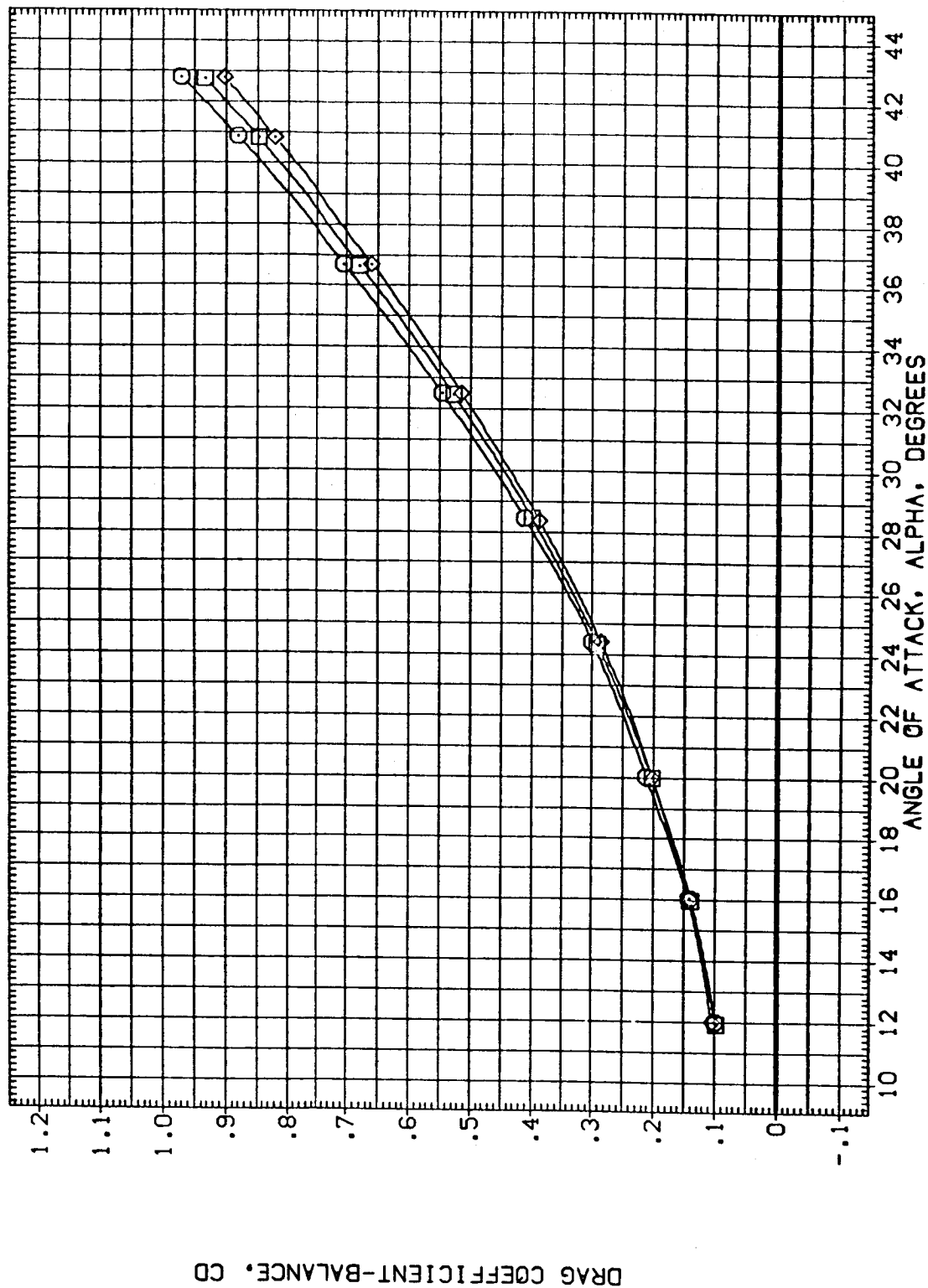


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (CE0001) AMES 3.5-190 0A98 (011-M7-M14)  
 (CE0002) AMES 3.5-190 0A98 (011-M7-M14)  
 (CE0003) AMES 3.5-190 0A98 (011-M7-M14)

BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION SQ. FT.  
 .000 .000 -11.700 55.000 SREF 2690.0000  
 .000 .000 -11.700 55.000 LREF 474.8000  
 .000 .000 -11.700 55.000 BREF 936.6800  
 .000 .000 -11.700 55.000 XMRP 1076.7000  
 .000 .000 .0000 IN. X0  
 .000 .000 .0000 IN. Y0  
 .0150 SCALE

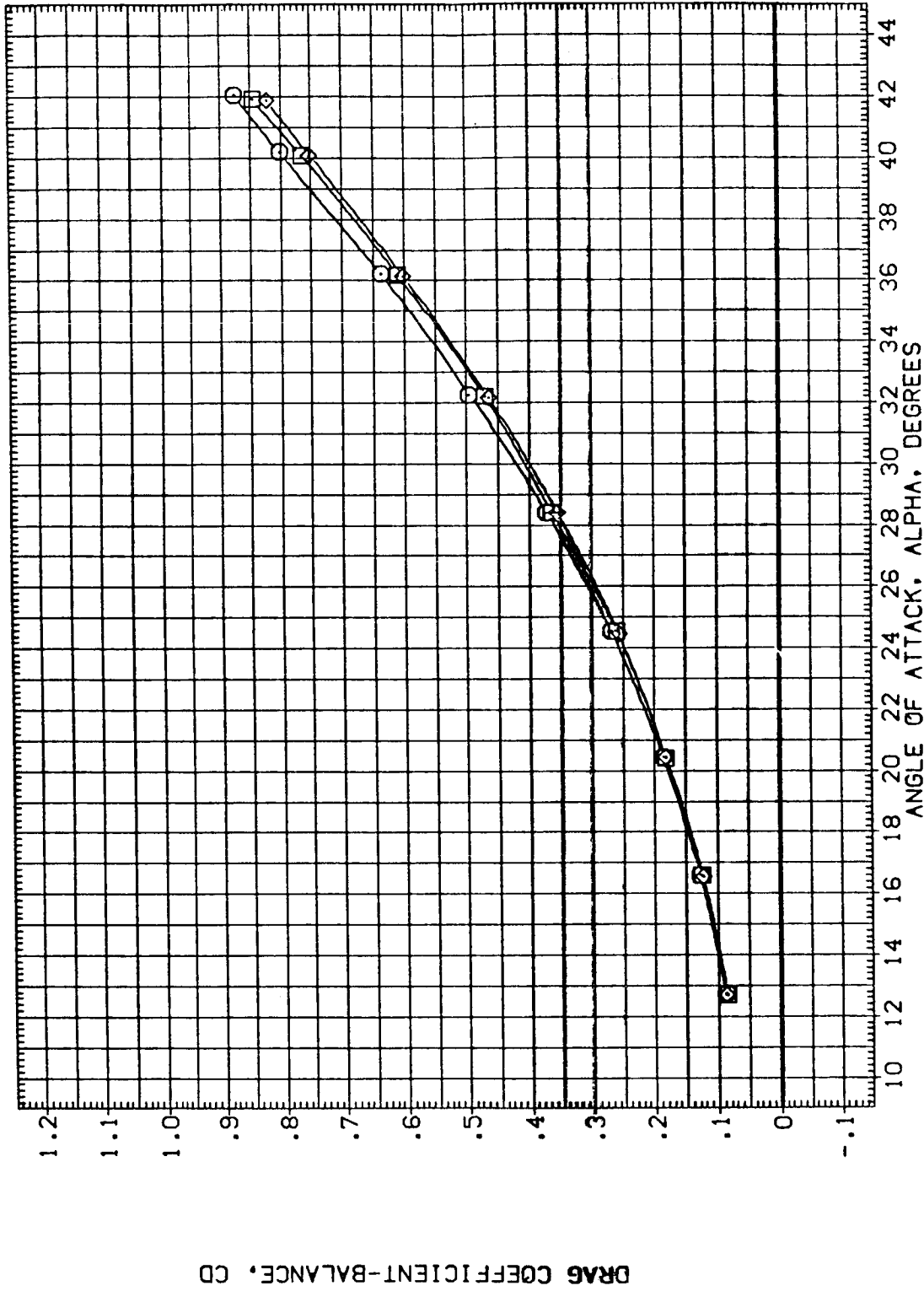


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CEG001)	AMES 3.5-190 0A98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEG002)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CEG003)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

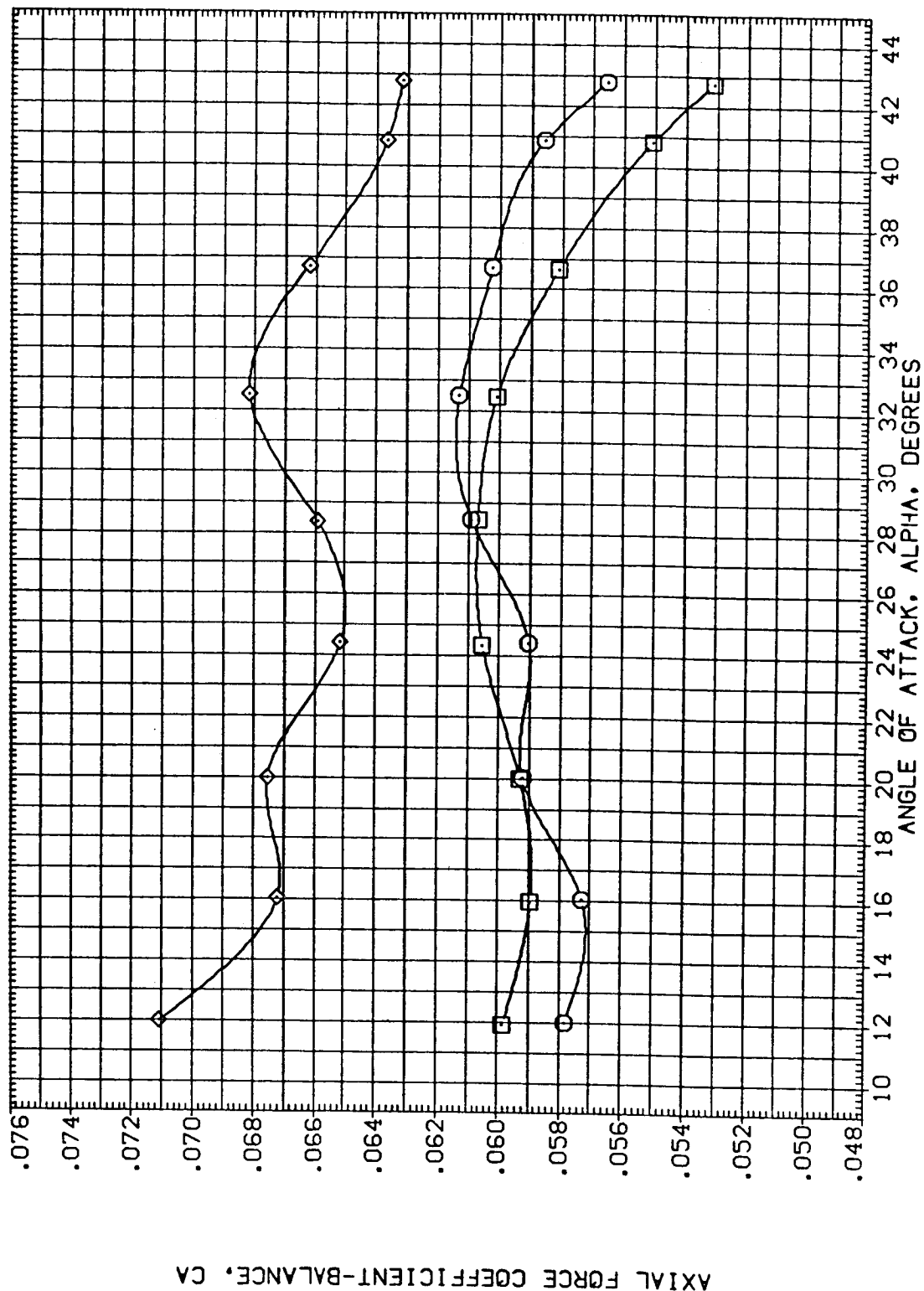


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
(CE0001)  
(CE0002)  
(CE0003)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7+M14)  
AMES 3.5-190 0A98 (011-M7+M14)  
AMES 3.5-190 0A98 (011-M7+M14)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPDBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

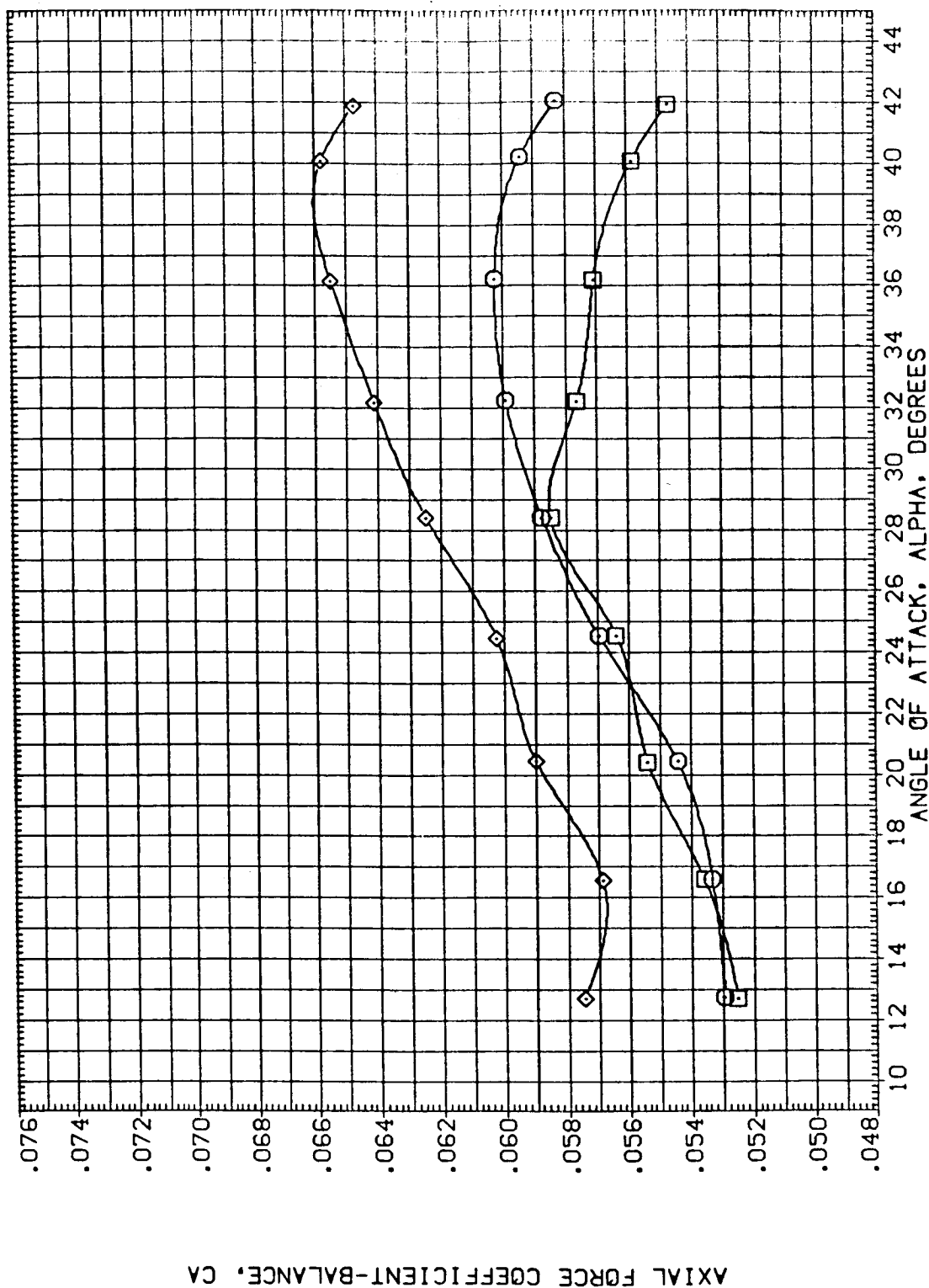


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE 375.0000 IN.Z0
						.0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

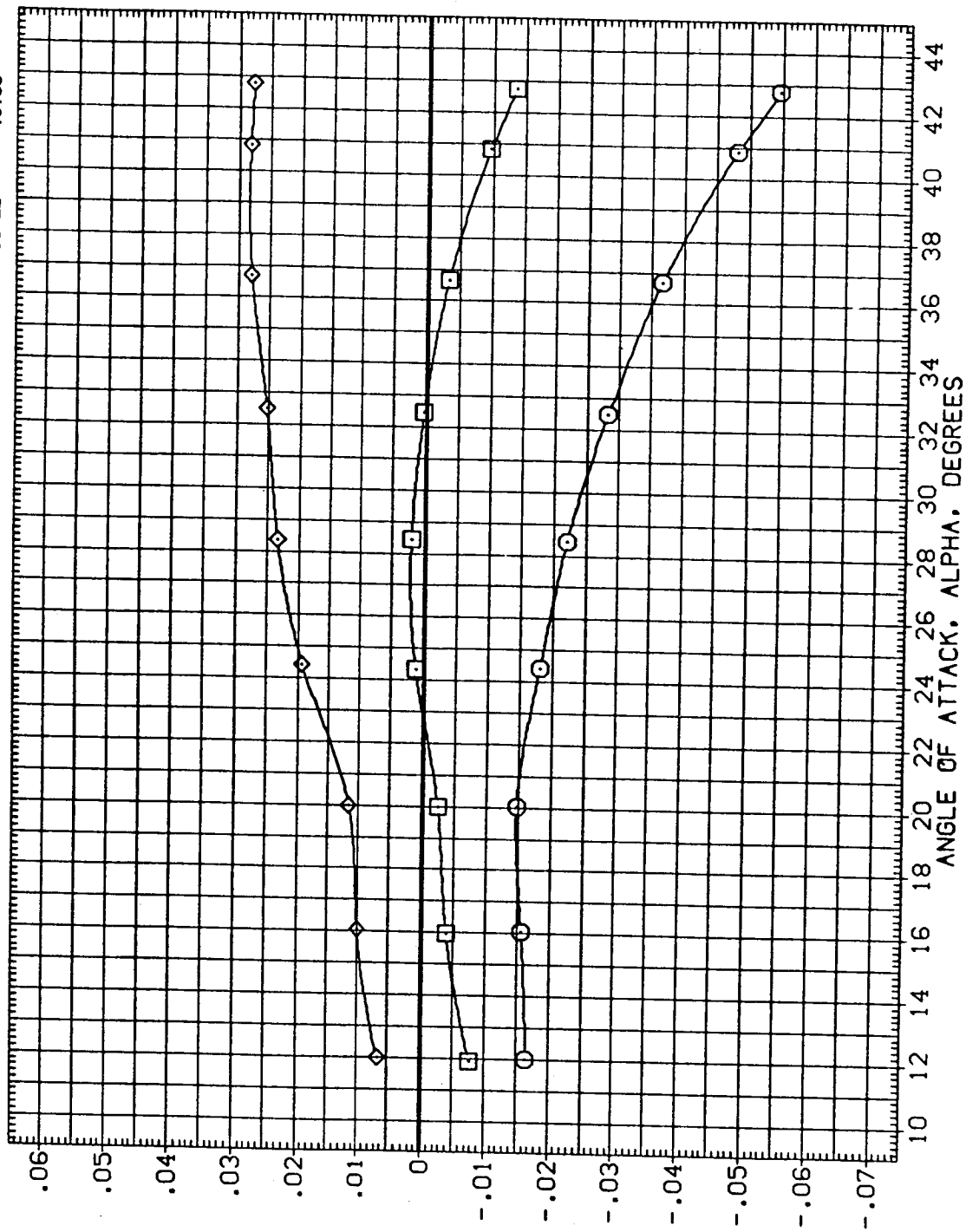


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A) MACH = 5.25

DATA SET SYMBOL  
 (CE0001)  
 (CE0002)  
 (CE0003)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-M7+M14)  
 AMES 3.5-190 0A98 (011-M7+M14)  
 AMES 3.5-190 0A98 (011-M7+M14)

BETA  
 .000  
 .000  
 .000

ELEVON  
 .000  
 -10.000  
 -40.000

BOFLAP  
 -11.700  
 -11.700  
 -11.700

SPOBRK  
 55.000  
 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.XG  
 YMRP .0000 IN.YG  
 ZMRP 375.0000 IN.ZG  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

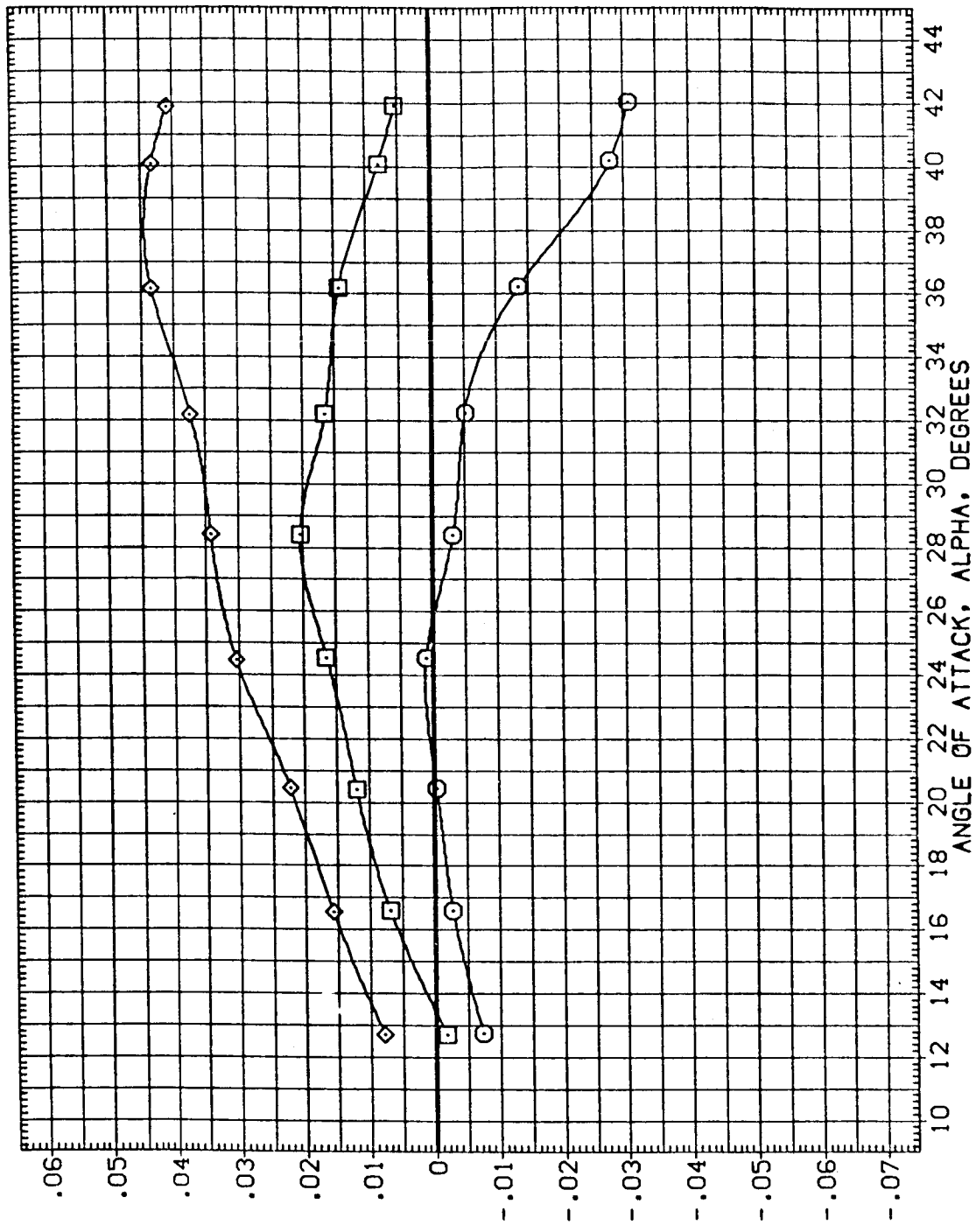


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDSBK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 DASH (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0002)	AMES 3.5-190 DASH (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.6000 IN.
(CE0003)	AMES 3.5-190 DASH (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE 375.0000 IN.Z0

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

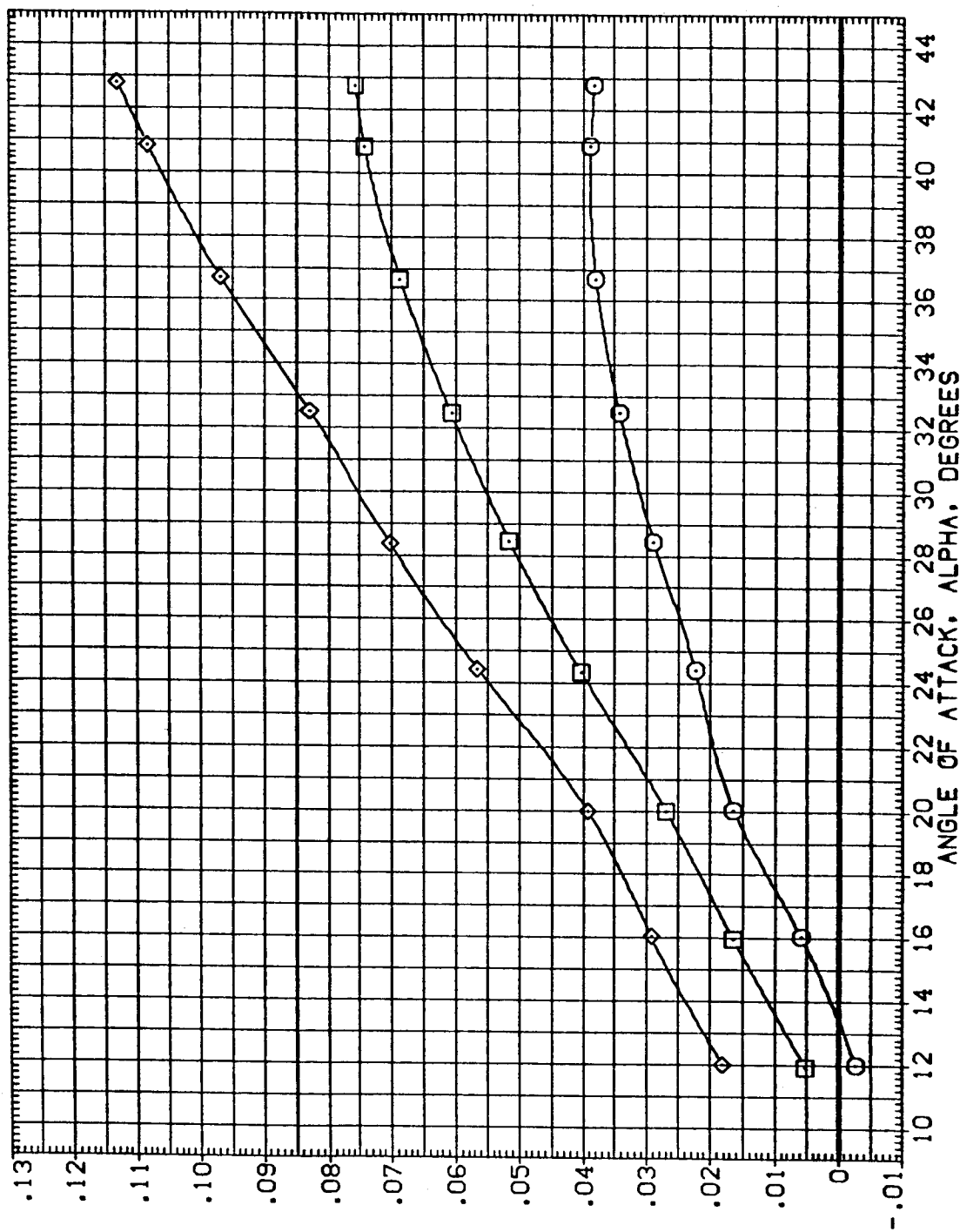


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

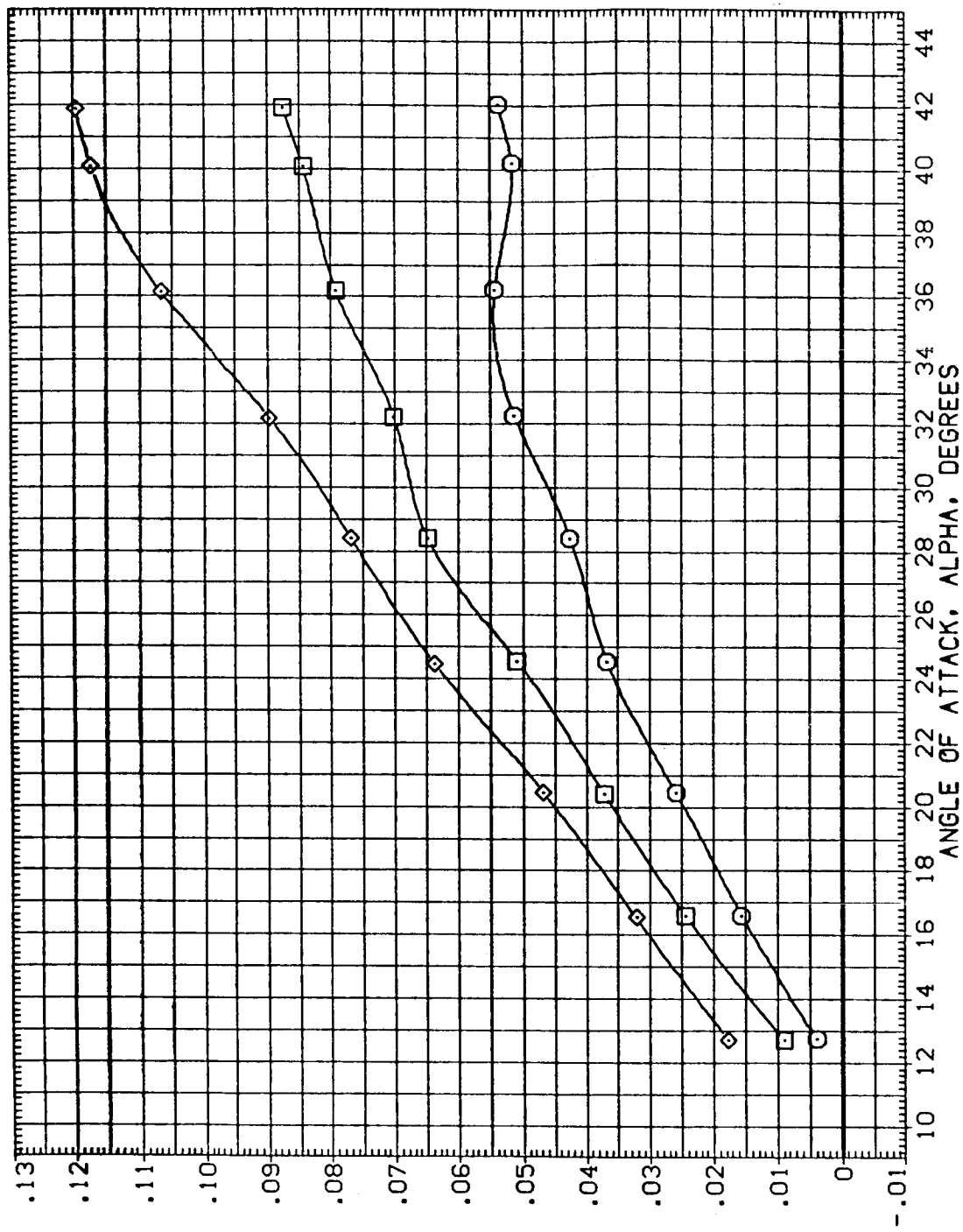


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CEG001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEG002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CEG003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

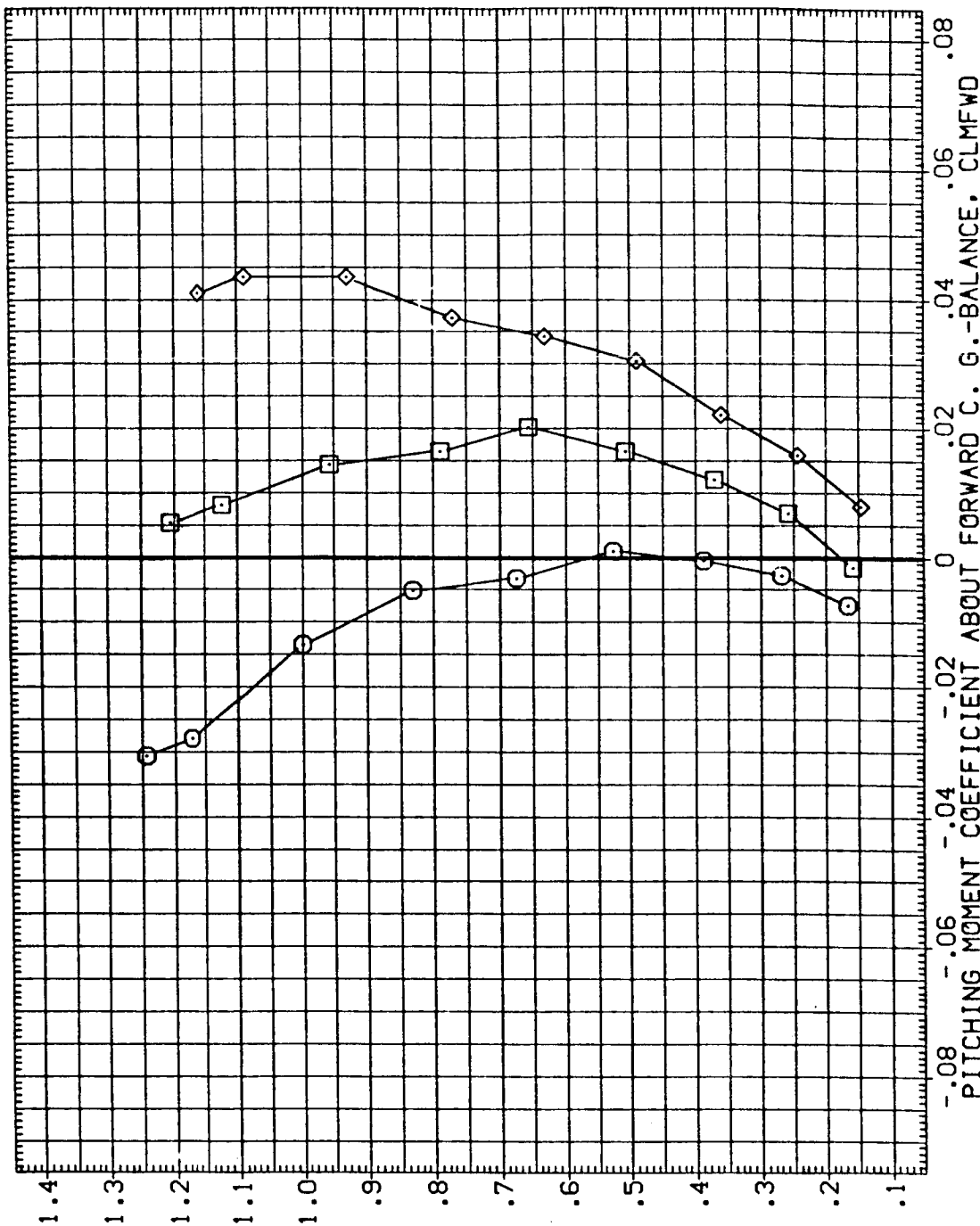


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 GA98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0002)	AMES 3.5-190 GA98 (011-M7-M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0003)	AMES 3.5-190 GA98 (011-M7-M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

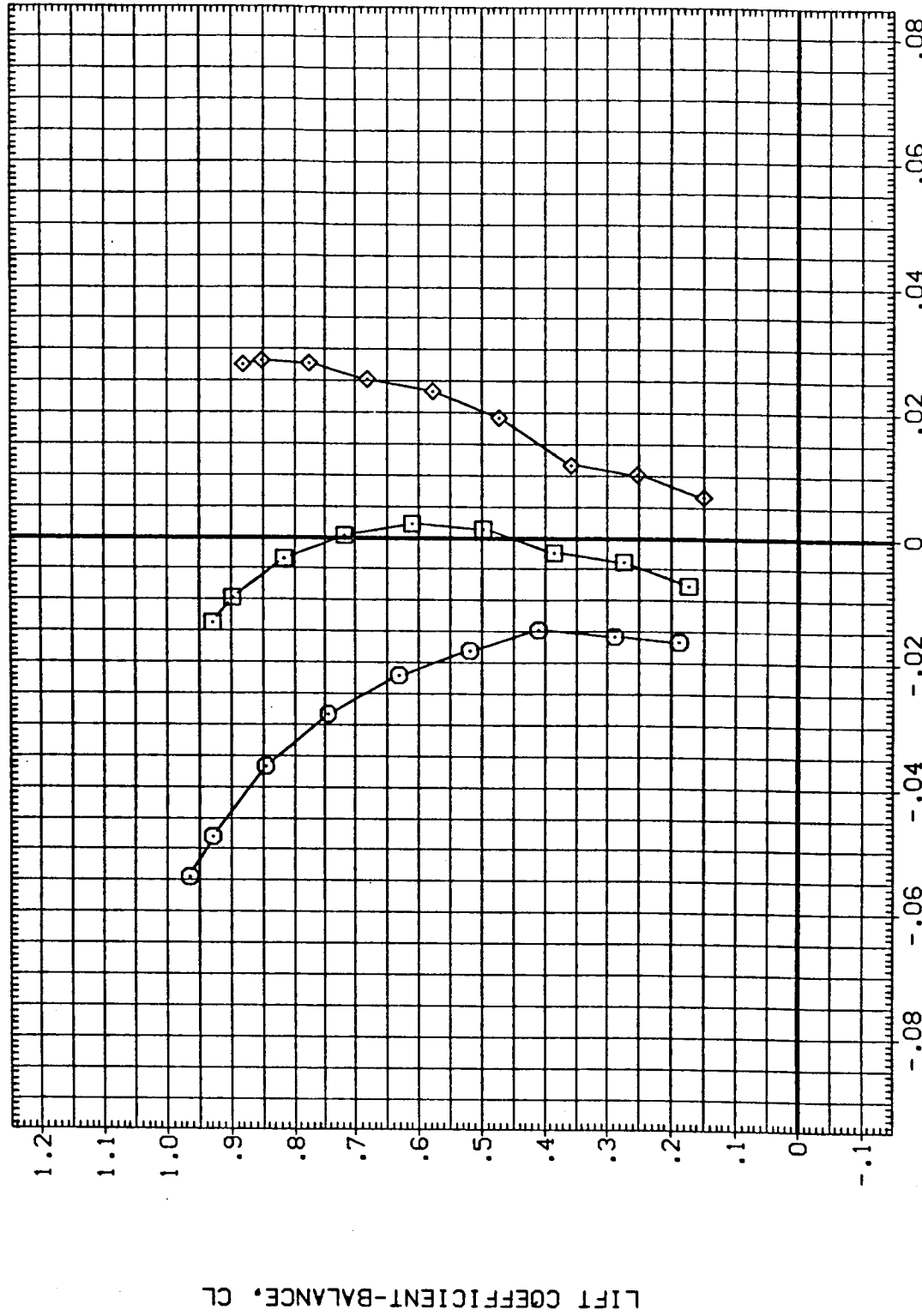


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
CAJMACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SO.FT.
(CE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XD
						YMRP .0000 IN.YD
						ZMRP 375.0000 IN.ZD
						SCALE .0150

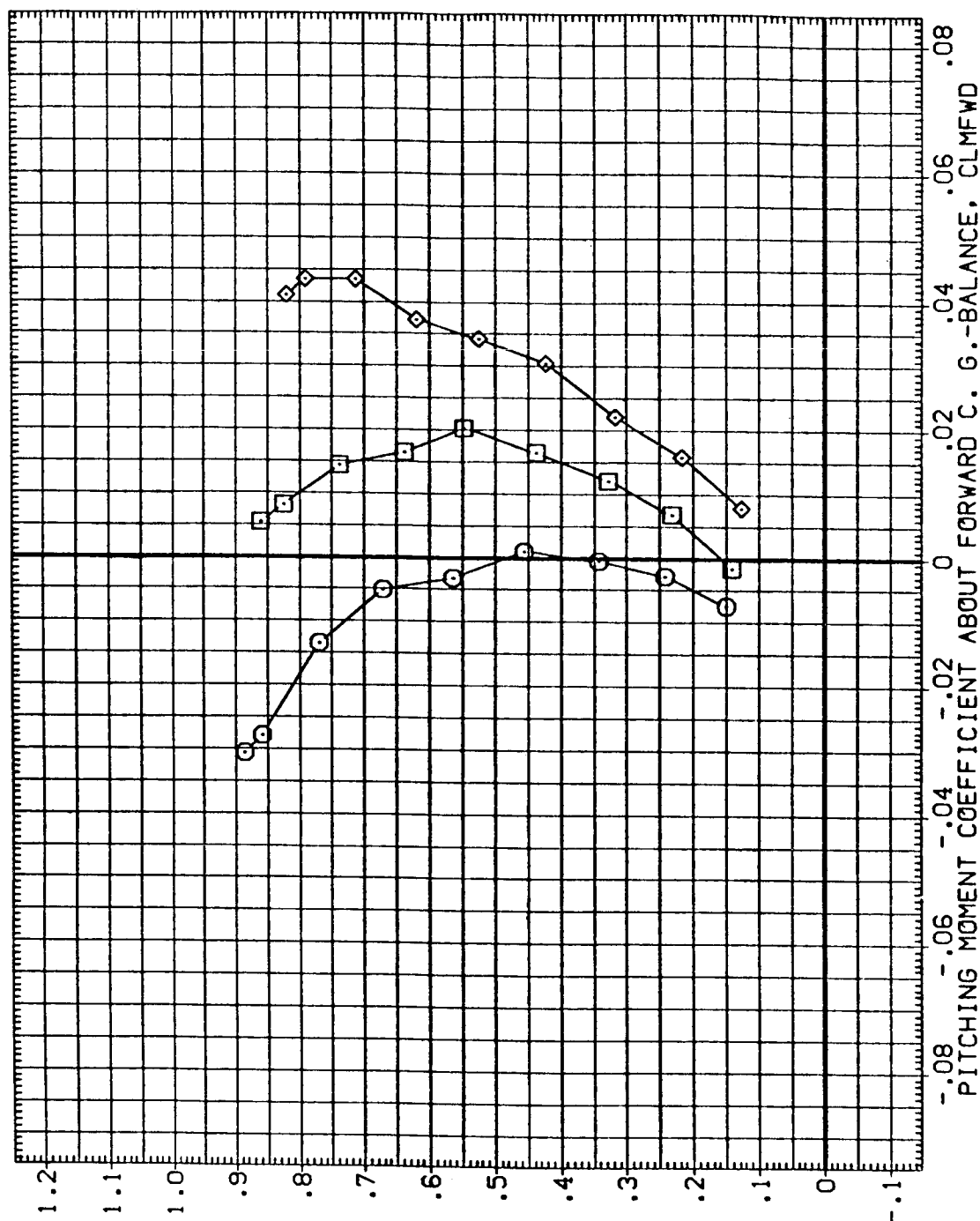


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (CE0001)    AMES 3.5-190 0A98 (011-M7+M14)  
 (CE0002)    AMES 3.5-190 0A98 (011-M7+M14)  
 (CE0003)    AMES 3.5-190 0A98 (011-M7+M14)

BETA    ELEVON    BOFLAP    SPOBRK  
 .000    .000    -11.700    55.000  
 .000    -10.000    -11.700    55.000  
 .000    -40.000    -11.700    55.000

REFERENCE INFORMATION  
 SREF    2690.0000    SQ. FT.  
 LREF    474.8000    IN.  
 BREF    936.6900    IN.  
 XMRP    1076.7000    IN. X0  
 YMRP    .0000    IN. Y0  
 ZMRP    375.0000    IN. Z0  
 SCALE    .0150

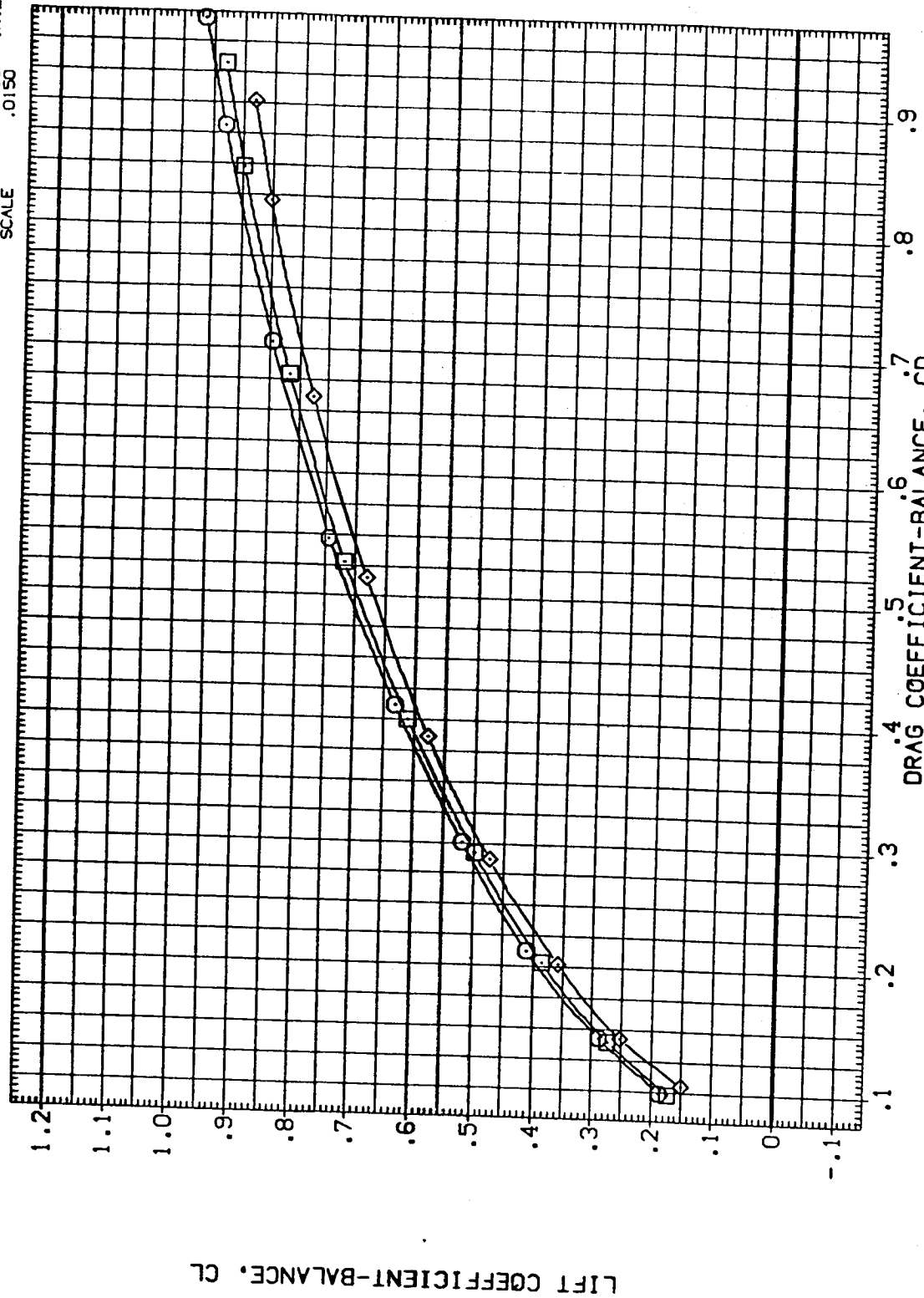


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    REFERENCE INFORMATION

(CE0001)	AMES 3.5-190 OA98 (011-M7+M14)	SREF	2690.0000	50.FT.
(CE0002)	AMES 3.5-190 OA98 (011-M7+M14)	LREF	474.8000	IN.
(CE0003)	AMES 3.5-190 OA98 (011-M7+M14)	BREF	936.6800	IN.
		XMRP	1076.7000	IN.X0
		YMRP	.0000	IN.Y0
		ZMRP	375.0000	IN.Z0
		SCALE	.0150	

BETA    ELEVON    BOFLAP    SPOBRK

.000	.000	-11.700	55.000
.000	-10.000	-11.700	55.000
.000	-40.000	-11.700	55.000

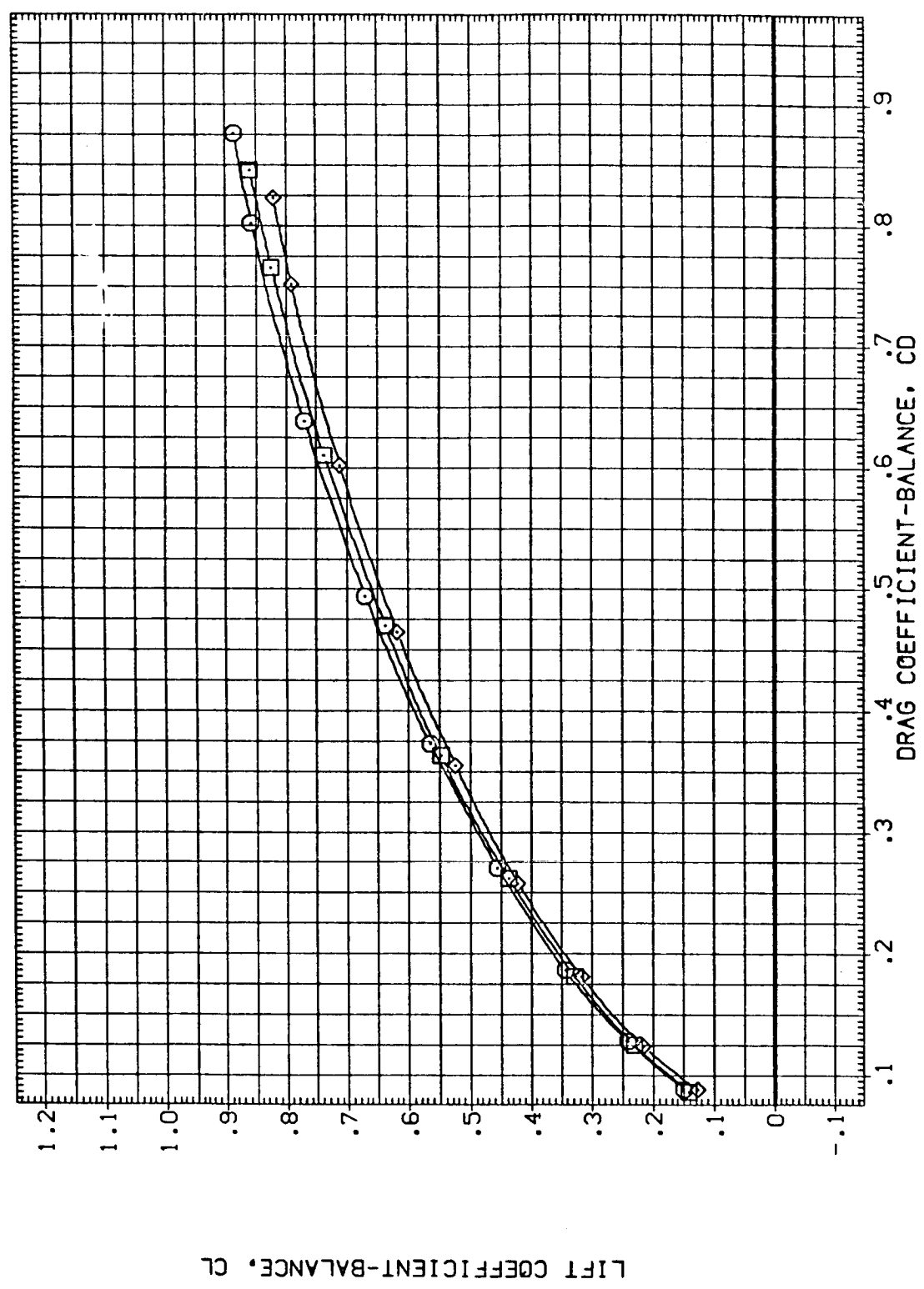


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (B)MACH = 10.27

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(EE0001)    AMES 3.5-190 0A98 (011-M7+M14)

(EE0002)    AMES 3.5-190 0A98 (011-M7+M14)

(EE0003)    AMES 3.5-190 0A98 (011-M7+M14)

BETA    ELEVON    BOFLAP    SPOBRK

.000    .000    -11.700    55.000

.000    -10.000    -11.700    55.000

.000    -40.000    -11.700    55.000

REFERENCE INFORMATION

SREF    2690.0000    50.FT.

LREF    474.8000    IN.

BREF    936.6800    IN.

YMRP    1076.7000    IN.X0

ZMRP    .0000    IN.Y0

SCALE    375.0000    IN.Z0

          .0150

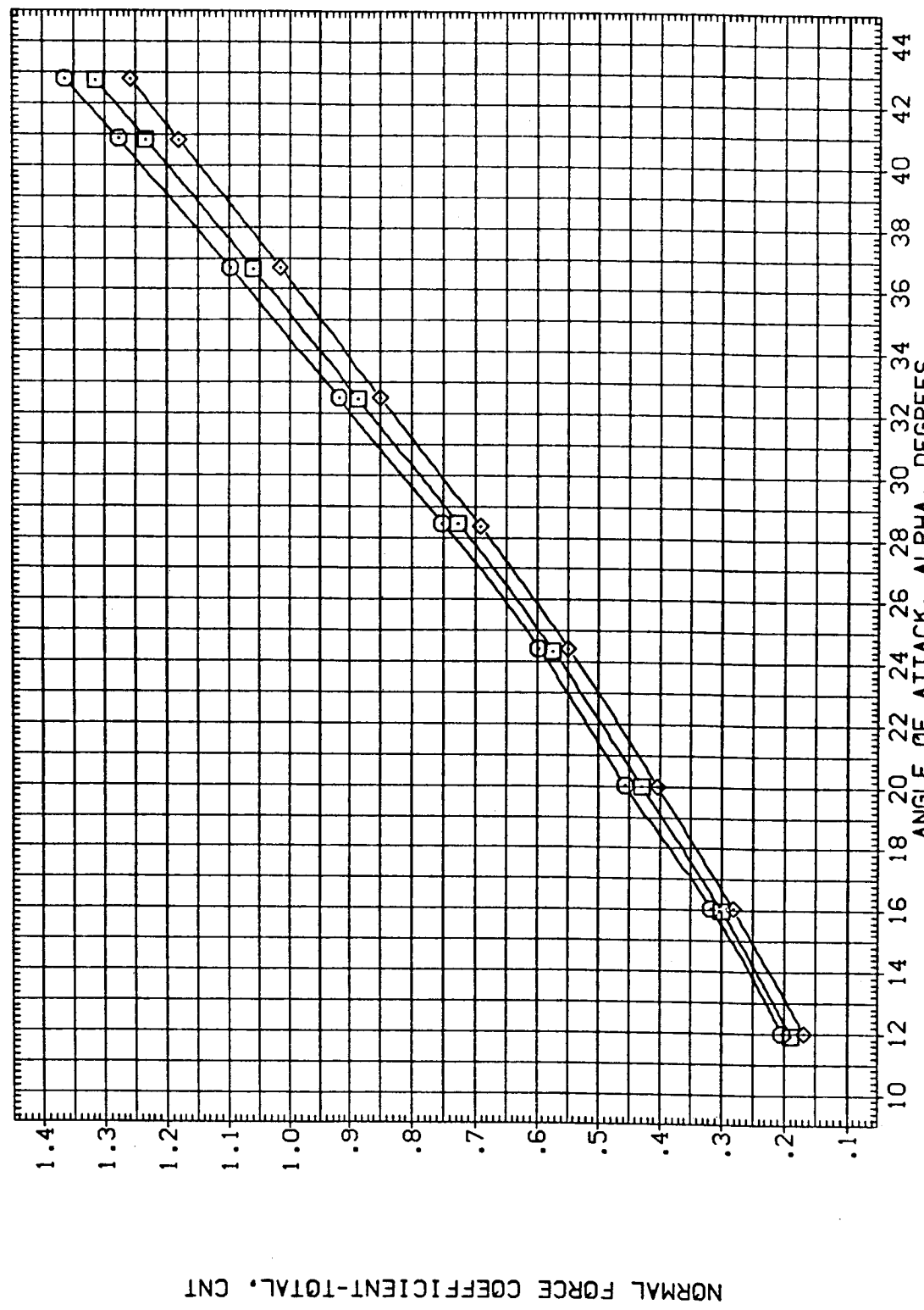


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (EEQ001) AMES 3.5-190 0A98 (011-M7-M14)  
 (EEQ002) AMES 3.5-190 0A98 (011-M7-M14)  
 (EEQ003) AMES 3.5-190 0A98 (011-M7-M14)

BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION  
 .000 .000 -11.700 55.000 SREF 2690.0000 SQ.FT.  
 .000 -10.000 -11.700 55.000 LREF 474.8000 IN.  
 .000 -40.000 -11.700 55.000 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

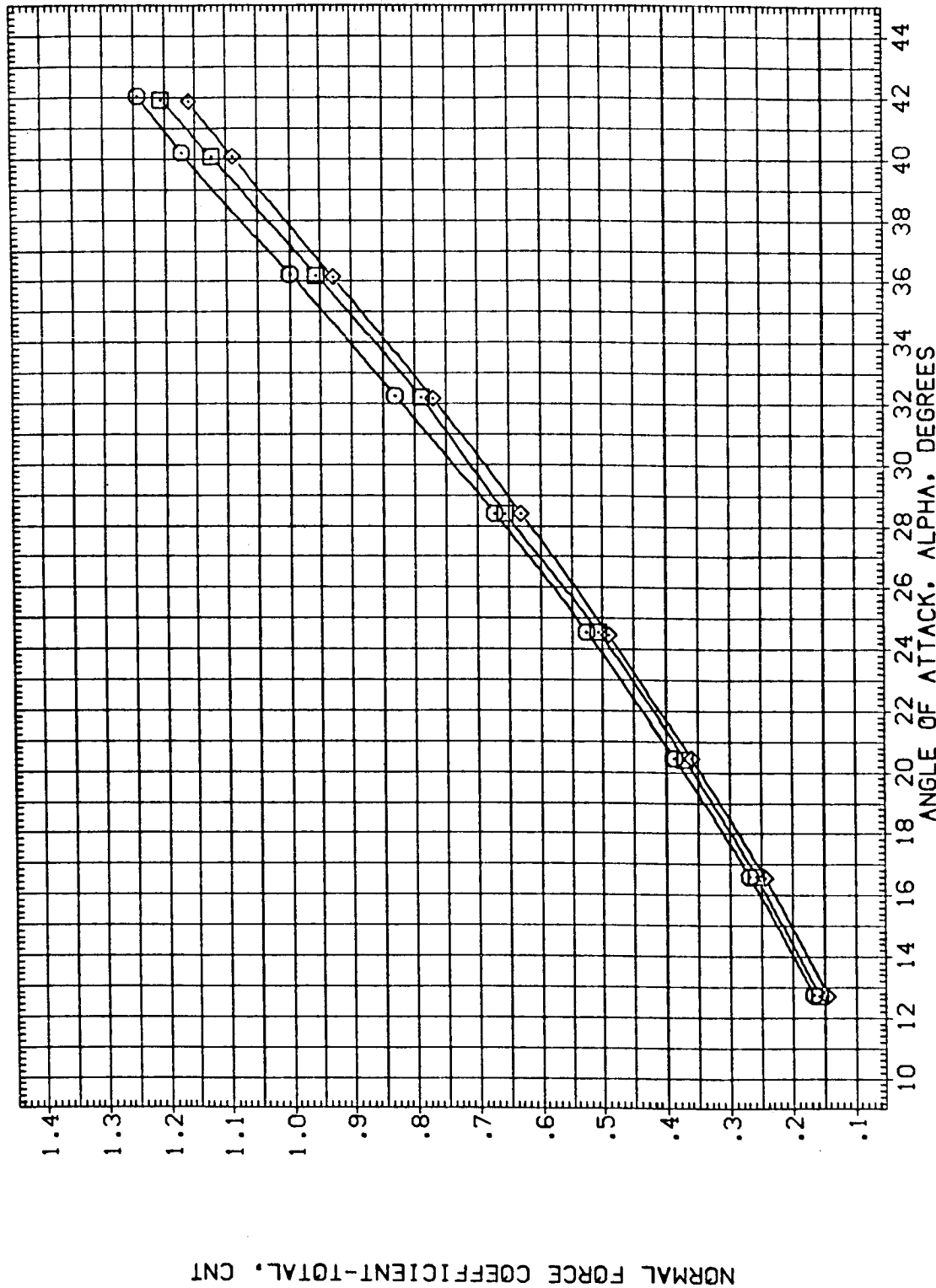


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 OA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0002)	AMES 3.5-190 OA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0003)	AMES 3.5-190 OA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

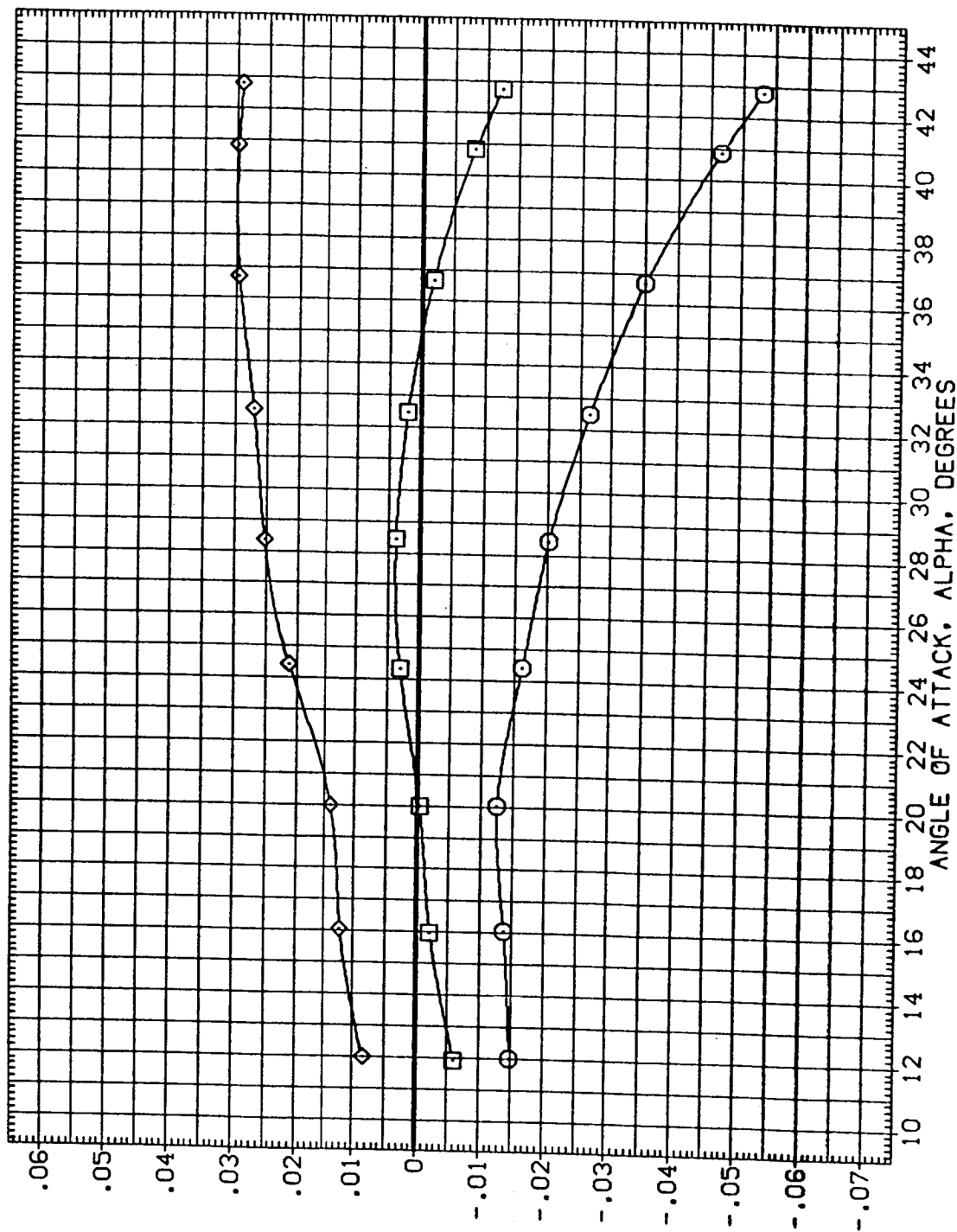


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
 (EE0001)  
 (EE0002)  
 (EE0003)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-M7+M14)  
 AMES 3.5-190 0A98 (011-M7+M14)  
 AMES 3.5-190 0A98 (011-M7+M14)

BETA  
 .000  
 .000  
 .000

ELEVON  
 .000  
 -10.000  
 -40.000

BOFLAP  
 -11.700  
 -11.700  
 -11.700

SPOBRK  
 55.000  
 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 50.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X  
 YMRP .0000 IN.Y  
 ZMRP 375.0000 IN.Z  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

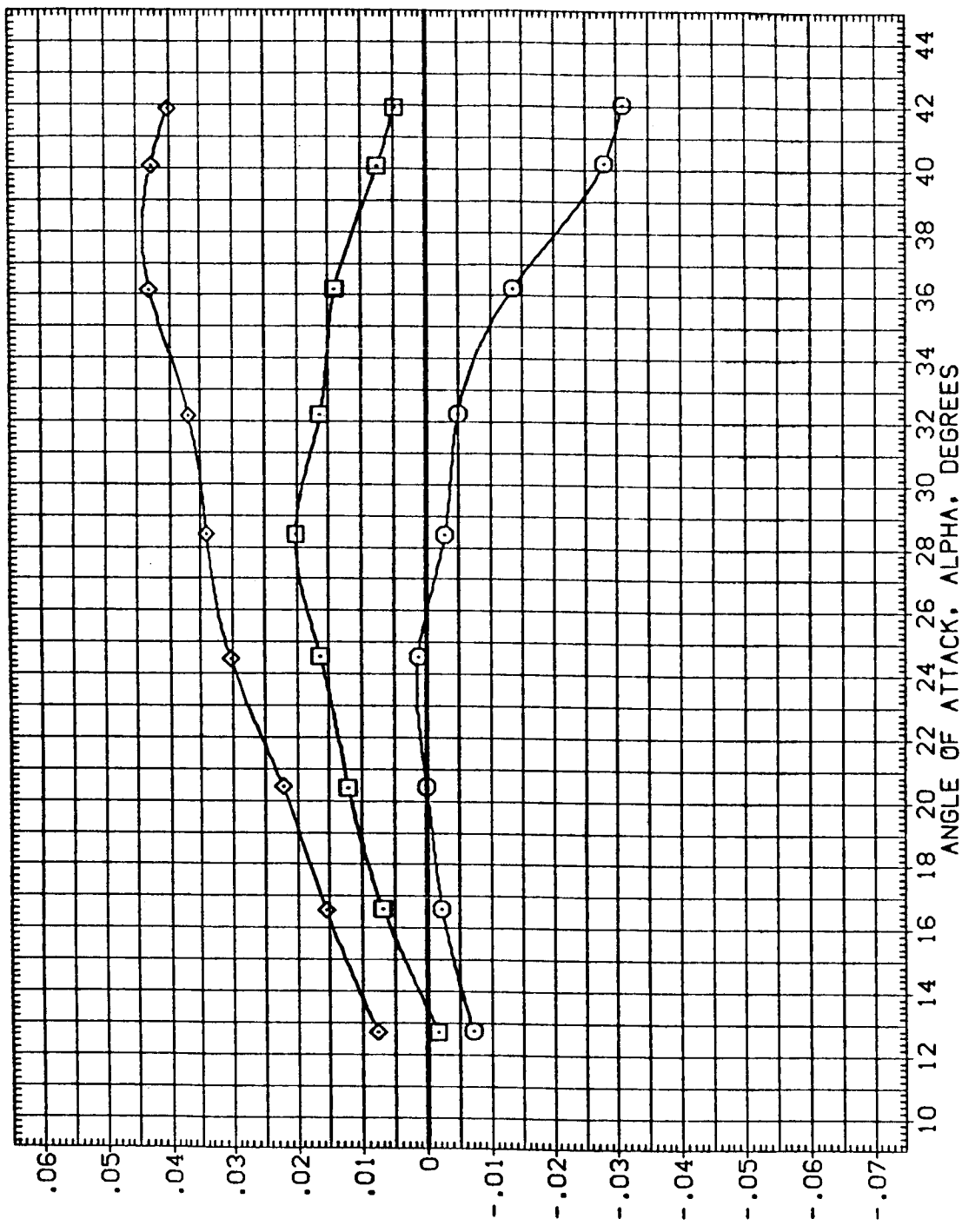


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPDBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

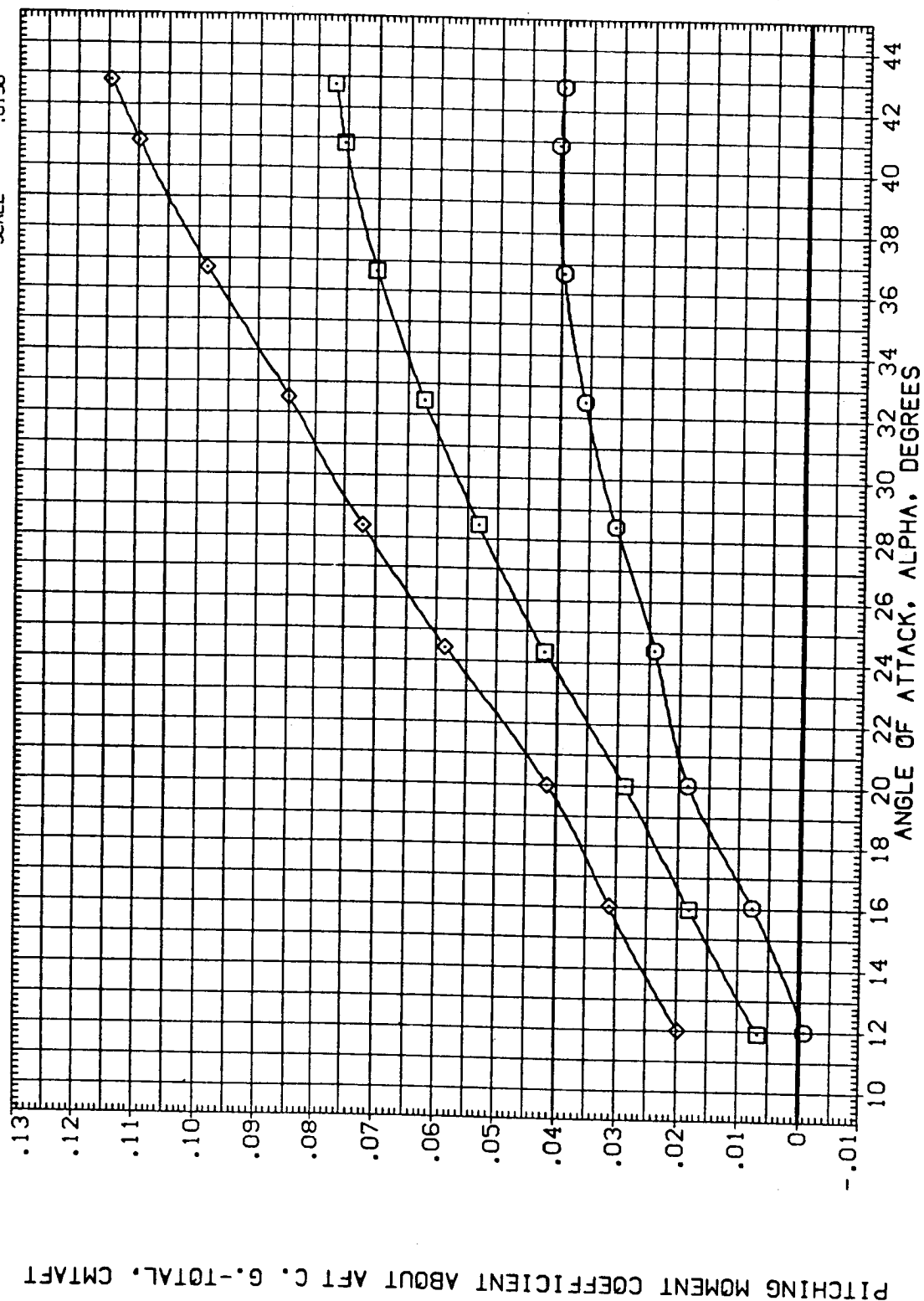


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(M)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEQ001)	AMES 3.5-190 OA98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ002)	AMES 3.5-190 OA98 (011-M7-M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EEQ003)	AMES 3.5-190 OA98 (011-M7-M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

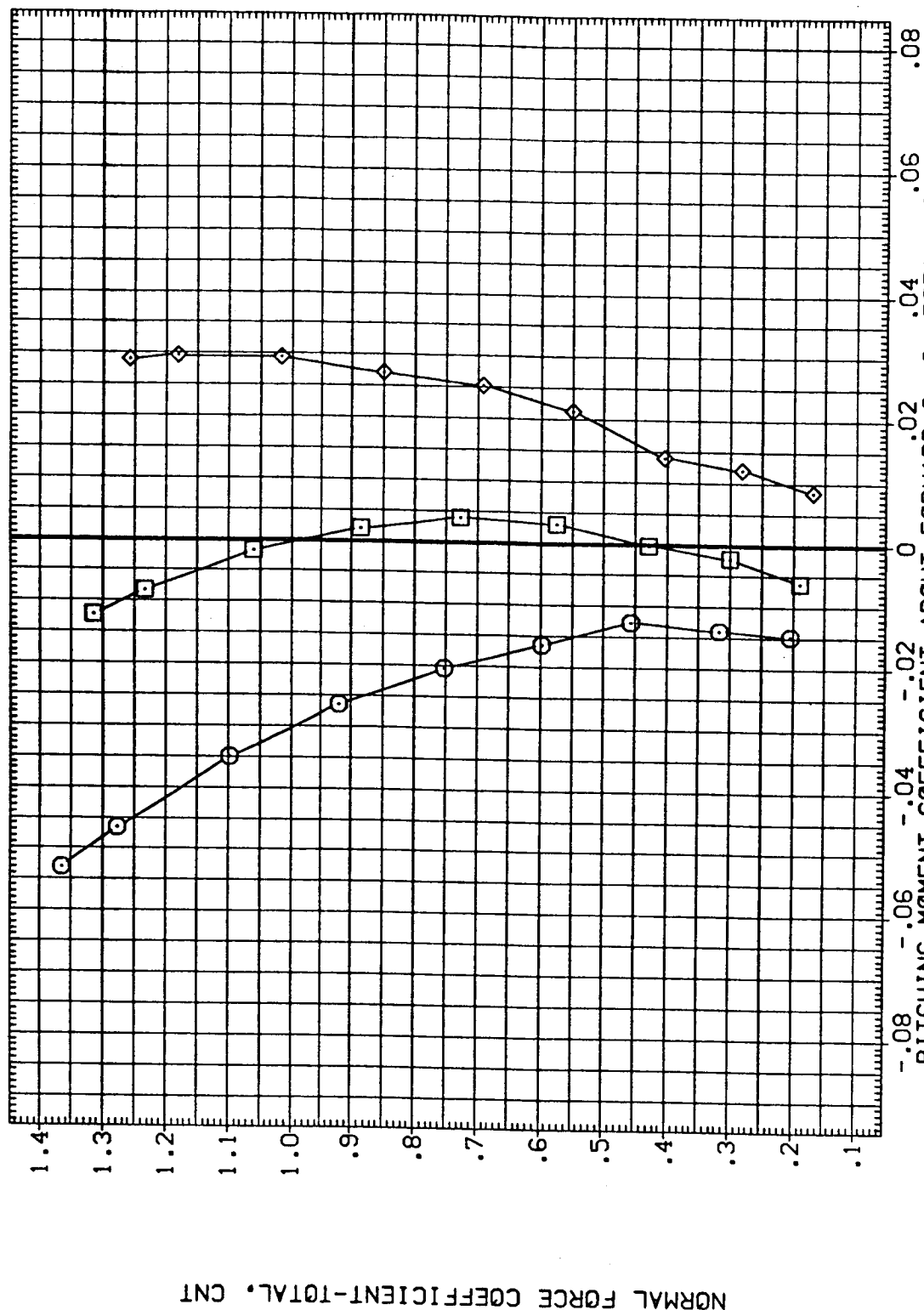


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(EE0001)    AMES 3.5-190 OA98 (011-M7+M14)

(EE0002)    AMES 3.5-190 OA98 (011-M7+M14)

(EE0003)    AMES 3.5-190 OA98 (011-M7+M14)

BETA    ELEVON    BOFLAP    SPOBRK

.000    .000    -11.700    55.000

.000    -10.000    -11.700    55.000

.000    -40.000    -11.700    55.000

REFERENCE INFORMATION

SREF    2690.0000    SQ.FT.

LREF    474.8000    IN.

BREF    936.6800    IN.

XMRP    1076.7000    IN.X0

YMRP    .0000    IN.Y0

ZMRP    375.0000    IN.Z0

SCALE    .0150

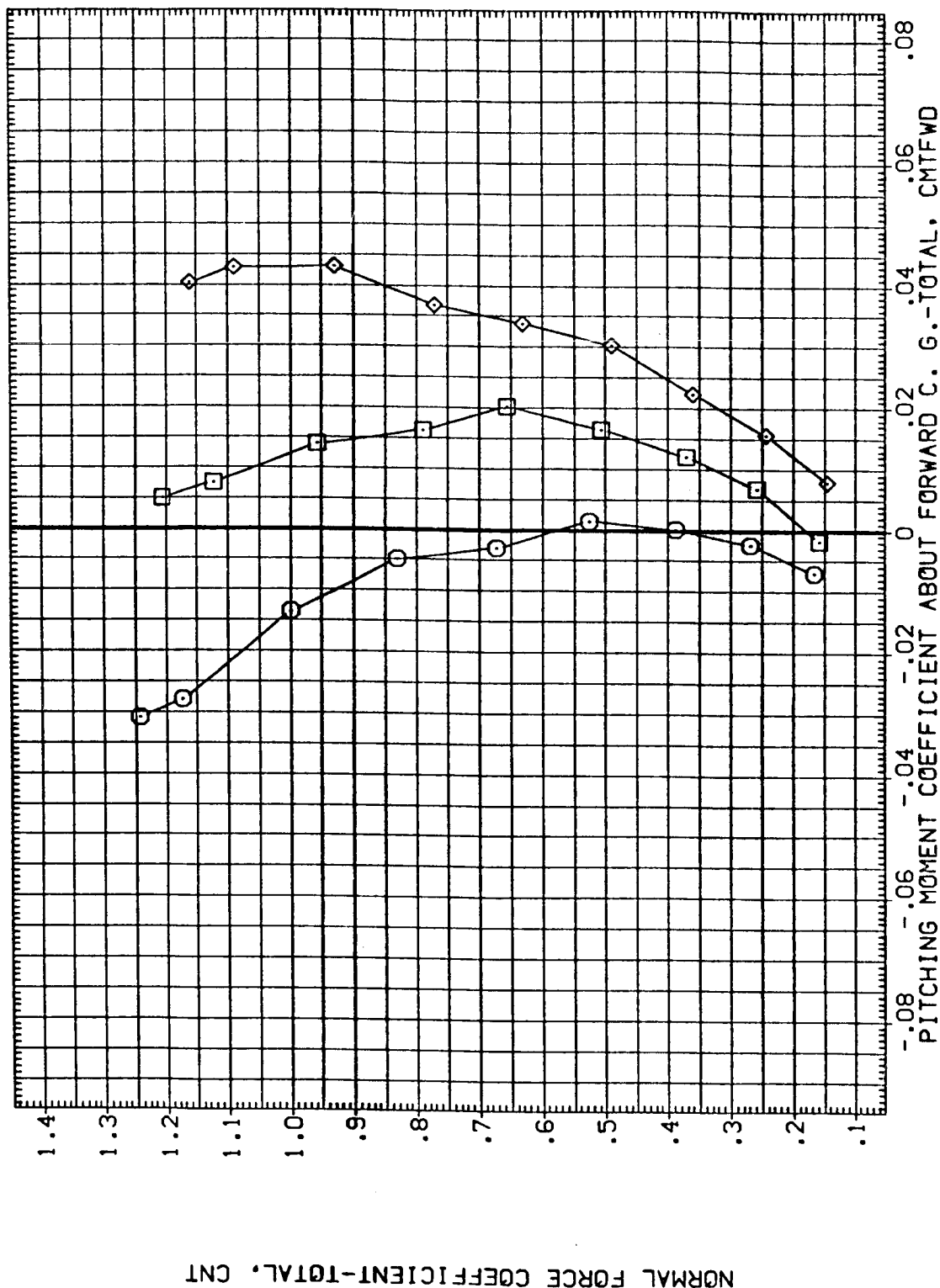


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL  
(EE0001)  
(EE0002)  
(EE0003)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7+M14)  
AMES 3.5-190 0A98 (011-M7+M14)  
AMES 3.5-190 0A98 (011-M7+M14)

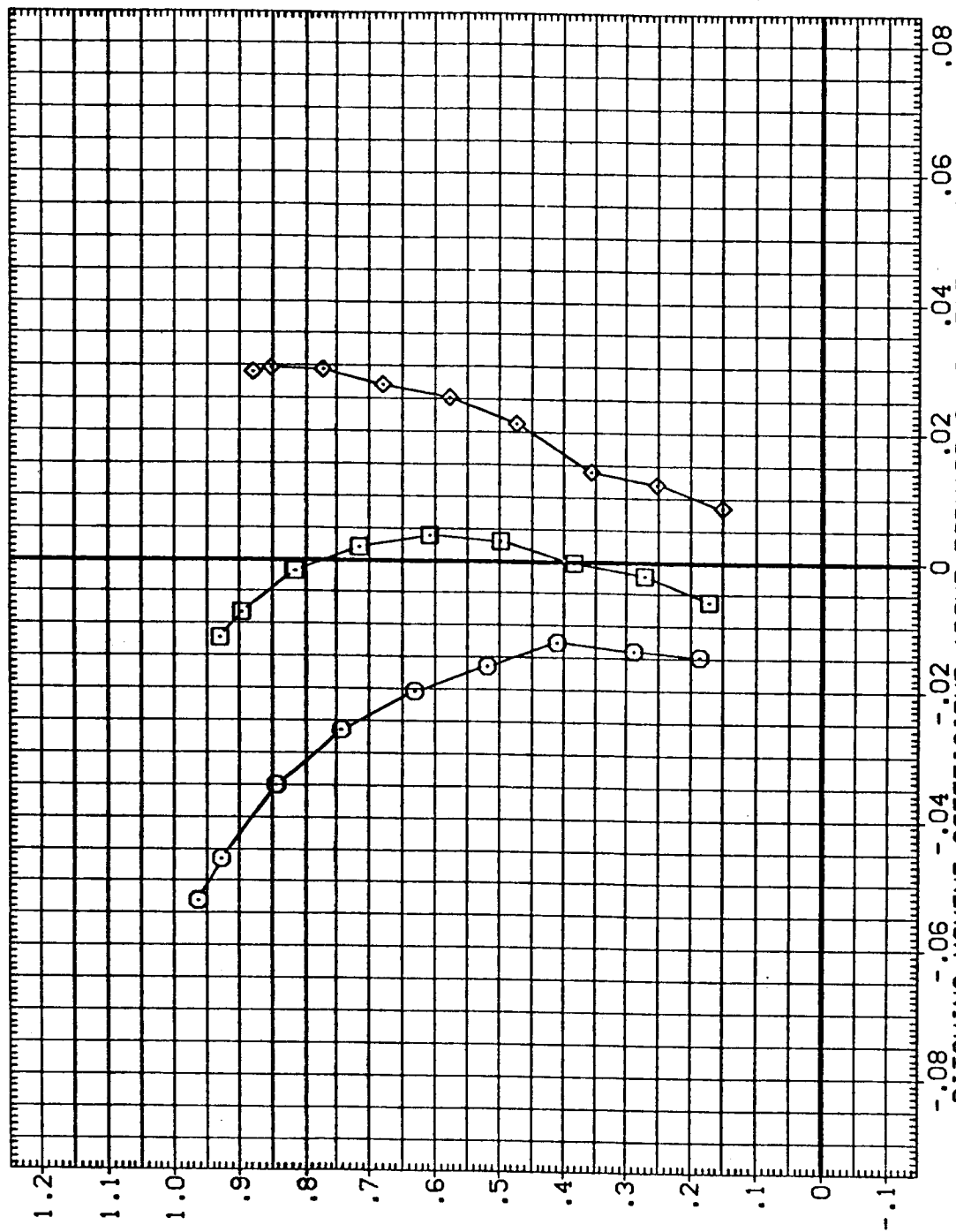
BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150



LIFT COEFFICIENT-TOTAL, CLT

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
(EE0001)  
(EE0002)  
(EE0003)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 GA98 (011-17+11.4)  
AMES 3.5-190 GA98 (011-17+11.4)  
AMES 3.5-190 GA98 (011-17+11.4)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

SPDRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.XD  
YMRP .0000 IN.YD  
ZMRP 375.0000 IN.ZD  
SCALE .0150

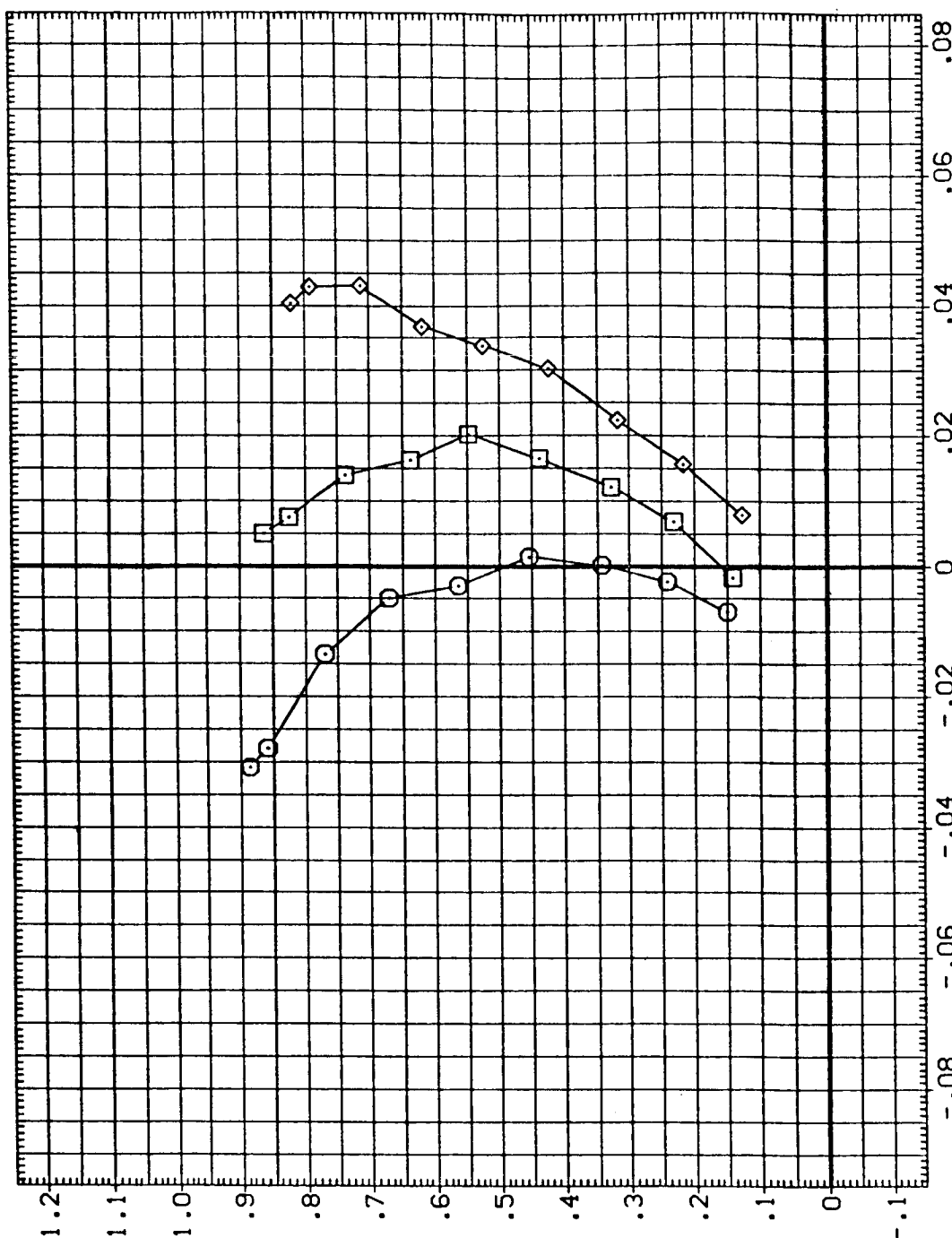


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP .0000 IN.ZB
						SCALE .0150

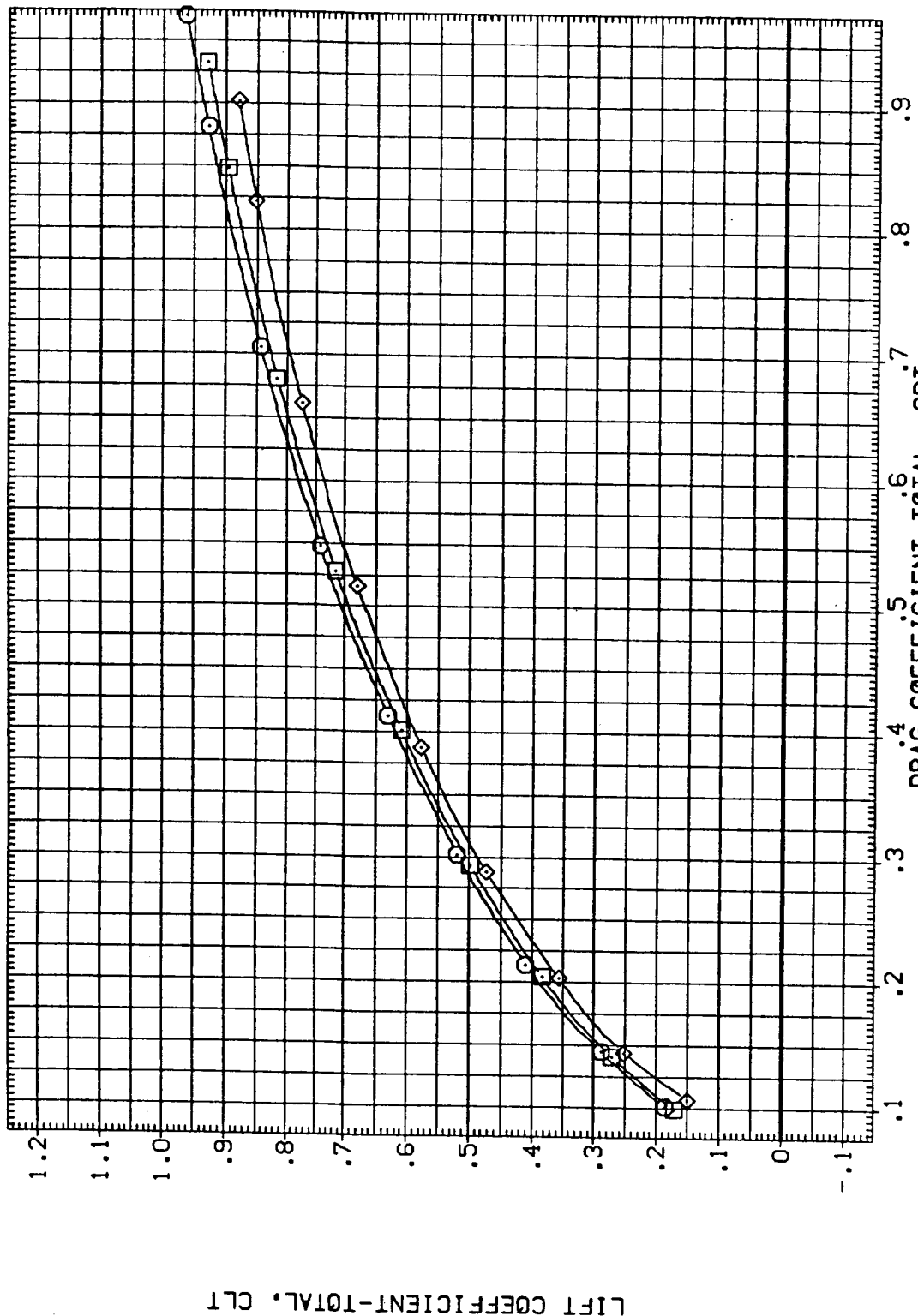


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL      CONFIGURATION DESCRIPTION

(EE0001)      AVES 3.5-190 DA98 (011-M7+M14)

(EE0002)      AVES 3.5-190 DA98 (011-M7+M14)

(EE0003)      AVES 3.5-190 DA98 (011-M7+M14)

BETA      ELEVON      BOFLAP      SPDRK

.000      .000      -11.700      55.000

.000      -10.000      -11.700      55.000

.000      -40.000      -11.700      55.000

REFERENCE INFORMATION

SREF      2690.0000      SQ.FT.

LREF      474.8000      IN.

BREF      936.6800      IN.

XMRP      1076.7000      IN.X0

YMRP      .0000      IN.Y0

ZMRP      375.0000      IN.Z0

SCALE      .0150

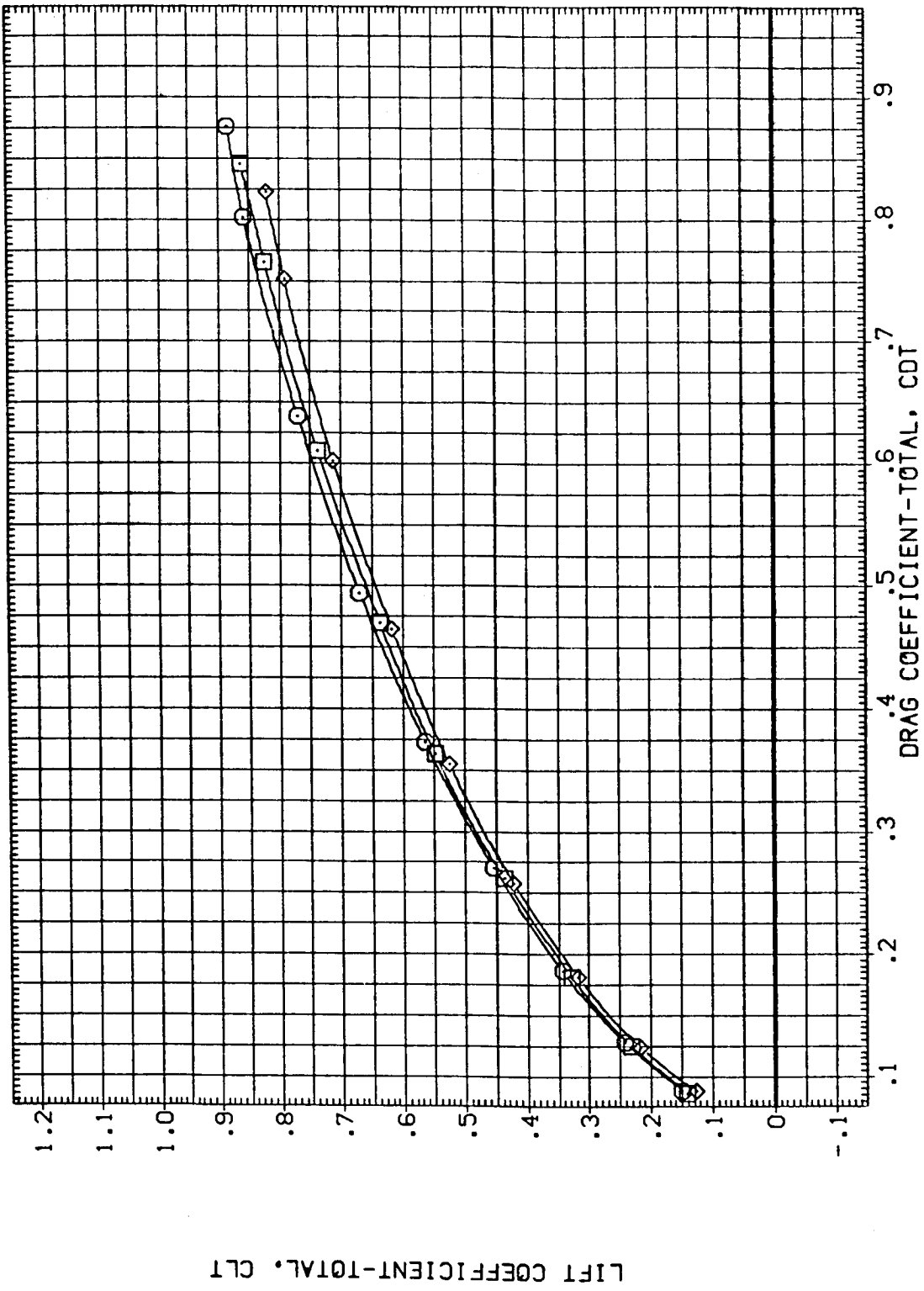


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-47-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0002)	AMES 3.5-190 0A98 (011-47-M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0003)	AMES 3.5-190 0A98 (011-47-M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

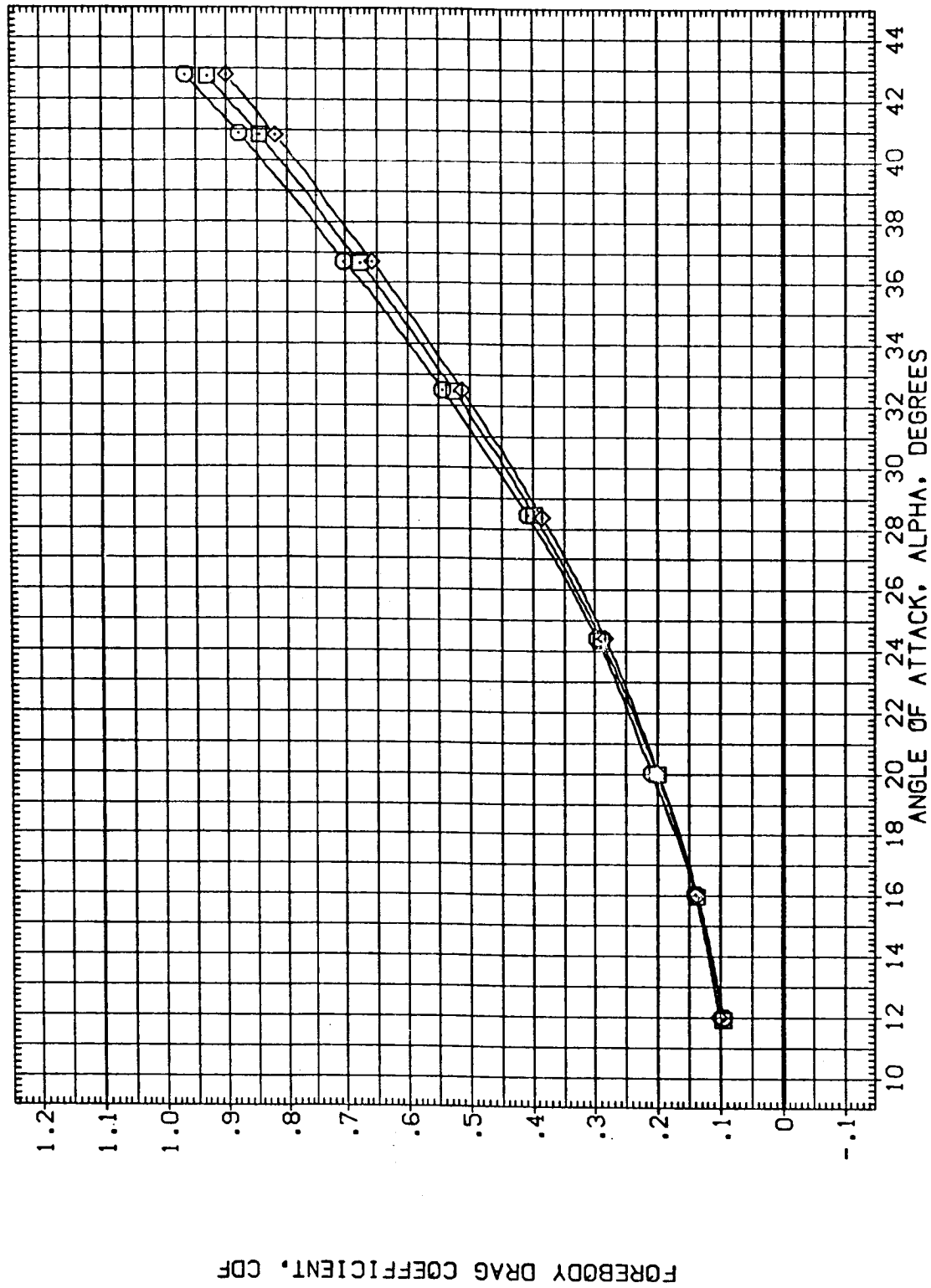


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(EE0001)    AMES 3.5-190 OA98 (011-M7-M14)

(EE0002)    AMES 3.5-190 OA98 (011-M7-M14)

(EE0003)    AMES 3.5-190 OA98 (011-M7-M14)

BETA    ELEVON    BDFLAP    SPOBRK

.000    .000    -11.700    55.000

.000    -10.000    -11.700    55.000

.000    -40.000    -11.700    55.000

REFERENCE INFORMATION

SREF    2690.0000    SQ.FT.

LREF    474.8000    IN.

BREF    936.6800    IN.

XMRP    1076.7000    IN.X0

YMRP    .0000    IN.Y0

ZMRP    375.0000    IN.Z0

SCALE    .0150

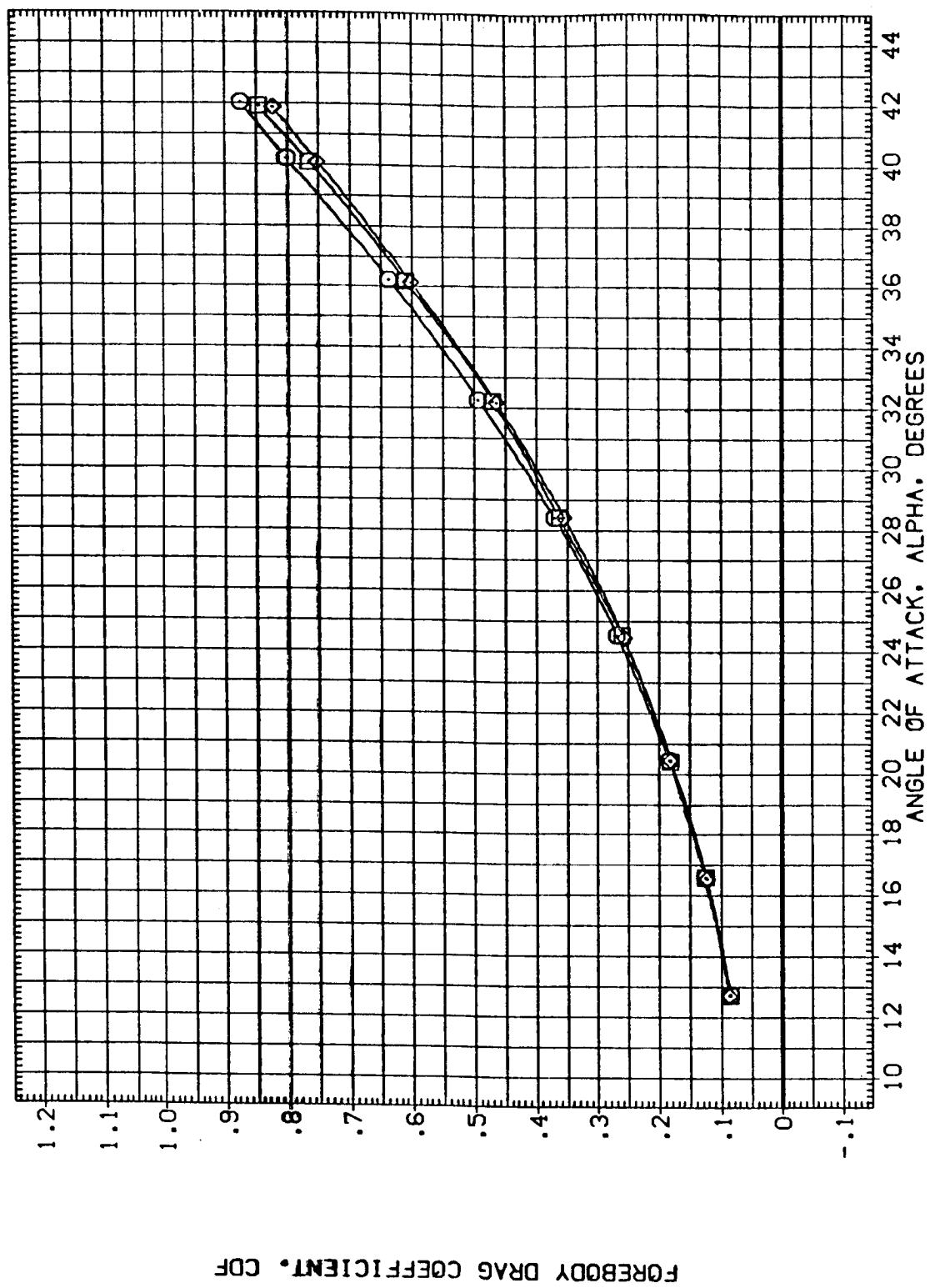


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AVES 3.5-190 0A98 (011-47+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0002)	AVES 3.5-190 0A98 (011-47+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0003)	AVES 3.5-190 0A98 (011-47+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

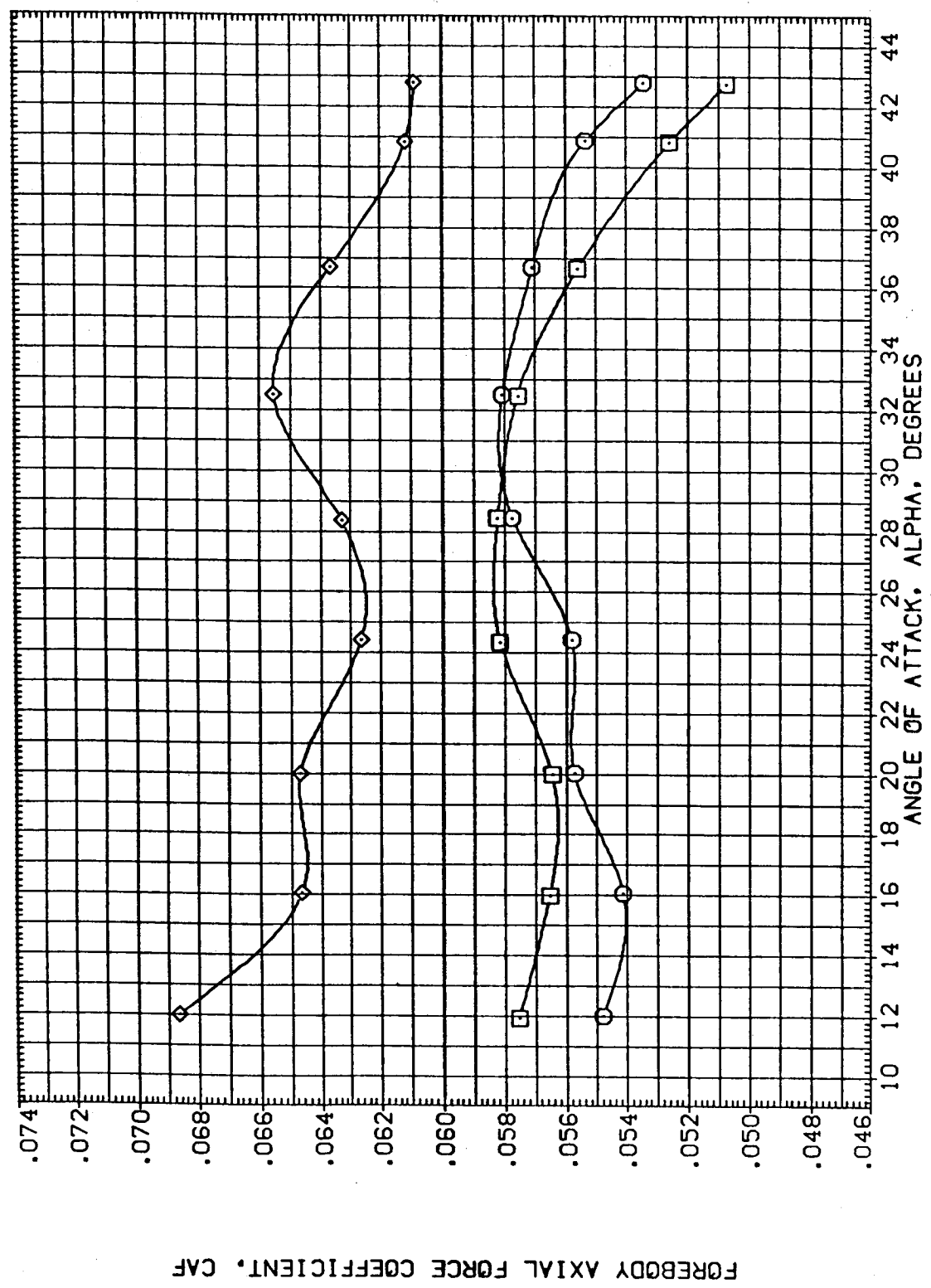


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL      CONFIGURATION DESCRIPTION

(EE0001)      AMES 3.5-190 OA98 (011-M7-M14)

(EE0002)      AMES 3.5-190 OA98 (011-M7-M14)

(EE0003)      AMES 3.5-190 OA98 (011-M7-M14)

BETA      ELEVON      BOFLAP      SPOBRK

.000      .000      -11.700      55.000

.000      -10.000      -11.700      55.000

.000      -40.000      -11.700      55.000

REFERENCE INFORMATION

SREF      2690.0000      SQ.FT.

LREF      474.8000      IN.

BREF      936.6900      IN.

XMRP      1076.7000      IN.X0

YMRP      .0000      IN.Y0

ZMRP      375.0000      IN.Z0

SCALE      .0150

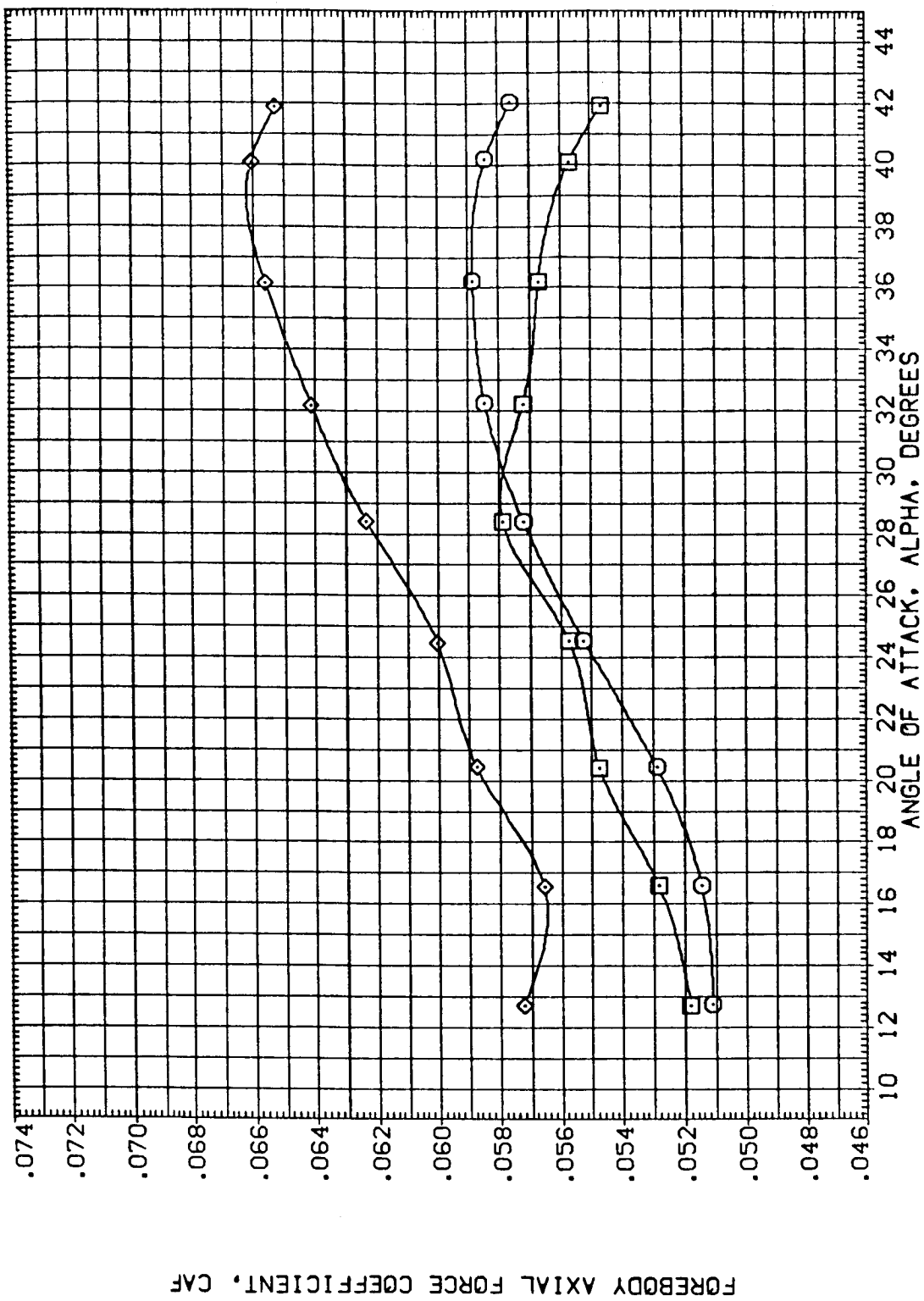


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 OA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0002)	AMES 3.5-190 OA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0003)	AMES 3.5-190 OA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE 375.0000 IN.Z0

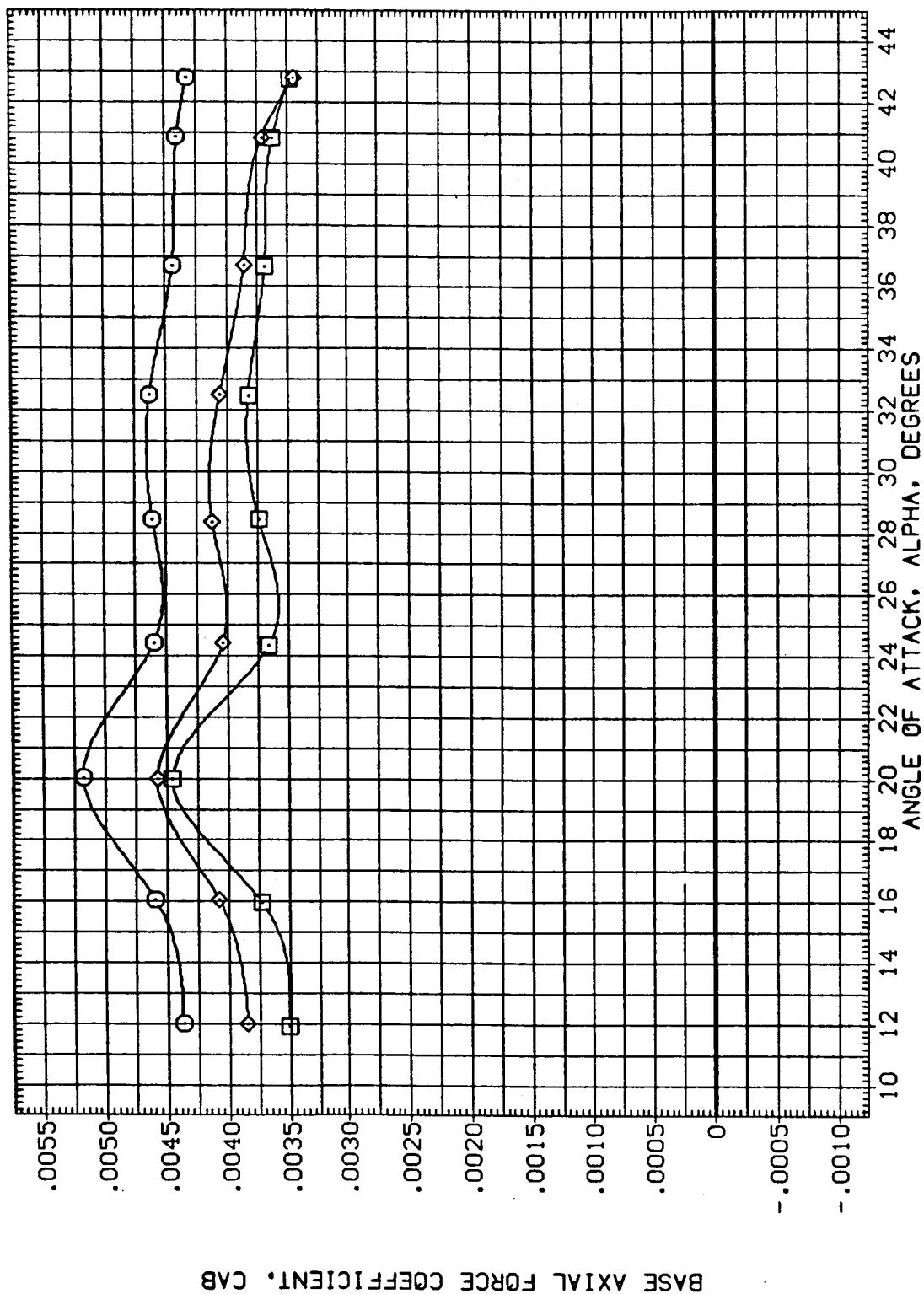


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
(EE0001)  
(EE0002)  
(EE0003)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7-M14)  
AMES 3.5-190 0A98 (011-M7-M14)  
AMES 3.5-190 0A98 (011-M7-M14)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPDRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

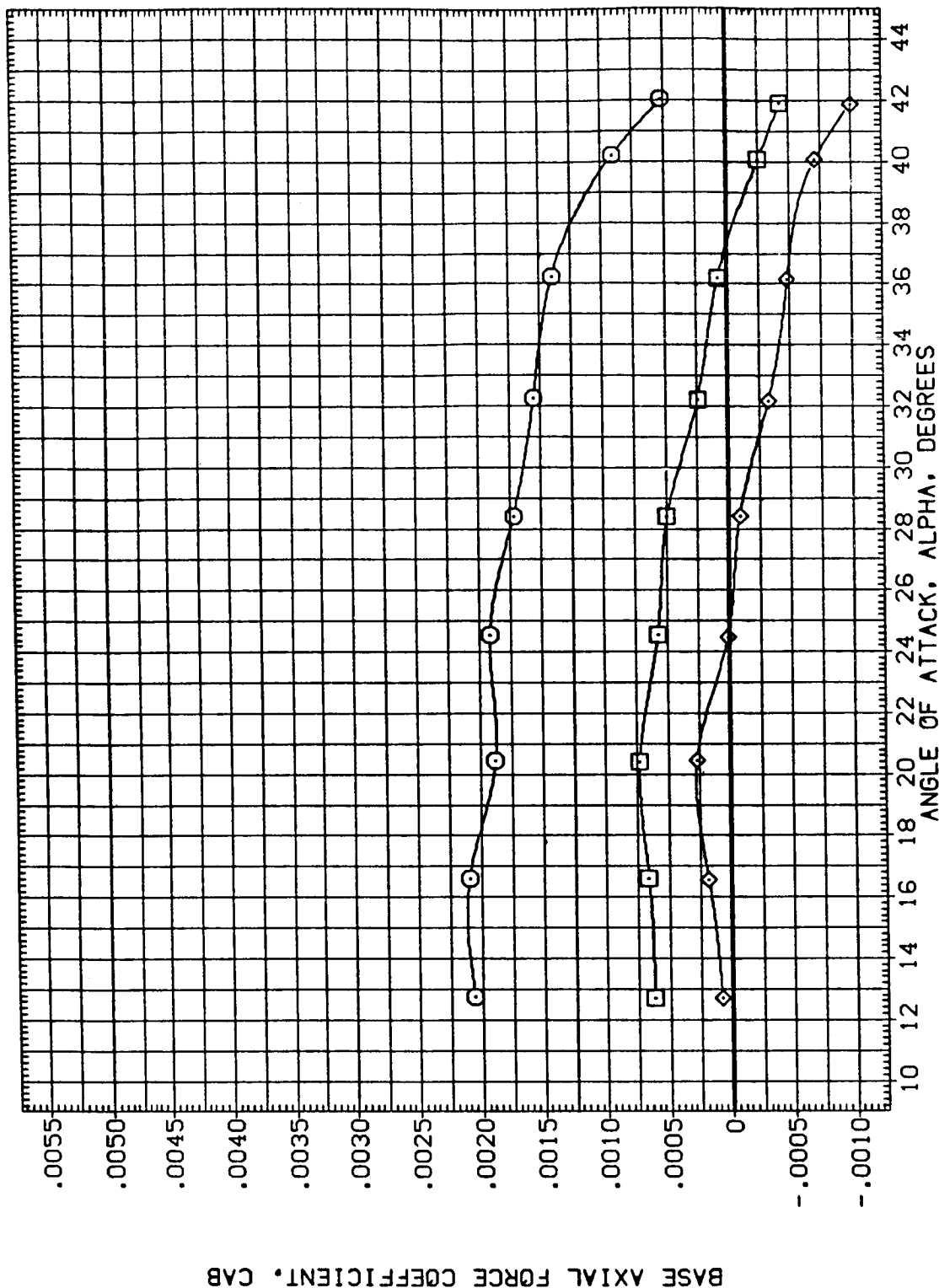


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BEG001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEG002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BEG003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

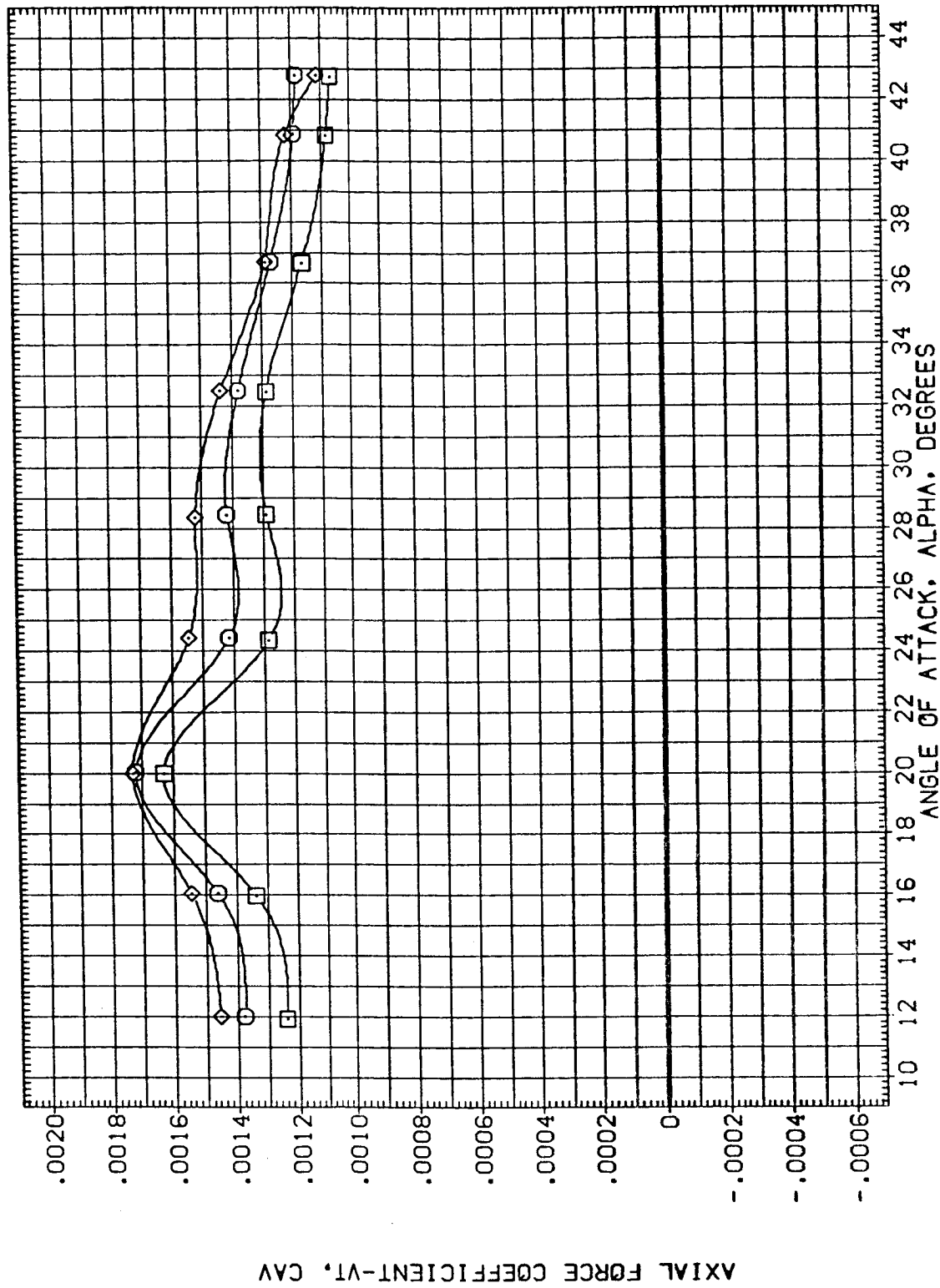


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
 (BE0001)  
 (BE0002)  
 (BE0003)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-M7+M14)  
 AMES 3.5-190 0A98 (011-M7+M14)  
 AMES 3.5-190 0A98 (011-M7+M14)

BETA  
 .000  
 .000  
 .000

ELEVON  
 .000  
 -10.000  
 -40.000

BOFLAP  
 -11.700  
 -11.700  
 -11.700

SPOBRK  
 55.000  
 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.5900 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

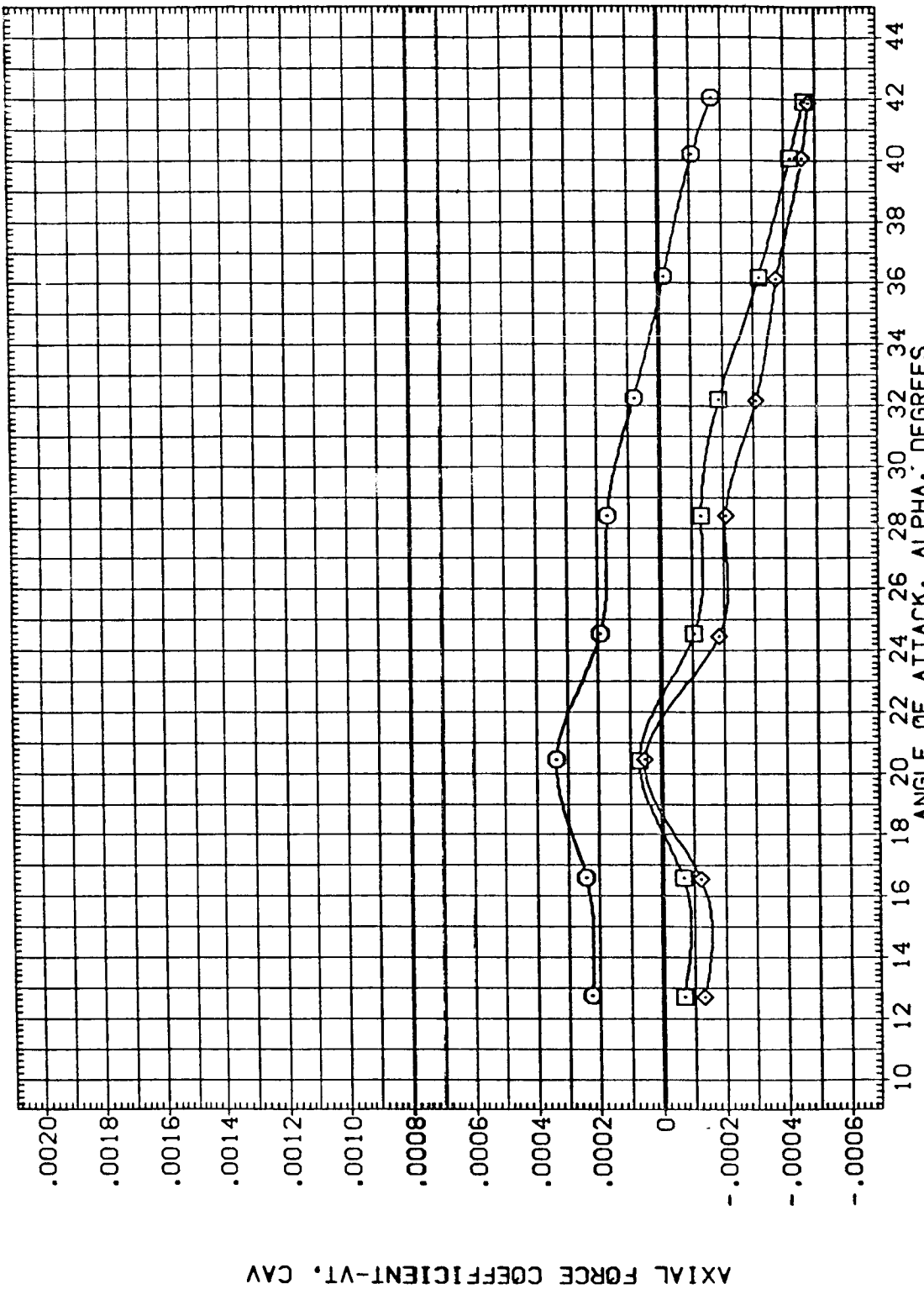


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL

(BE0001)  
(BE0002)  
(BE0003)

CONFIGURATION DESCRIPTION

AMES 3.5-190 OAS8 (011-M7+M14)  
AMES 3.5-190 OAS8 (011-M7+M14)  
AMES 3.5-190 OAS8 (011-M7+M14)

BETA

.000  
.000  
.000

ELEVON

.000  
-10.000  
-40.000

BOFLAP

-11.700  
-11.700  
-11.700

SPDBRK

55.000  
55.000  
55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

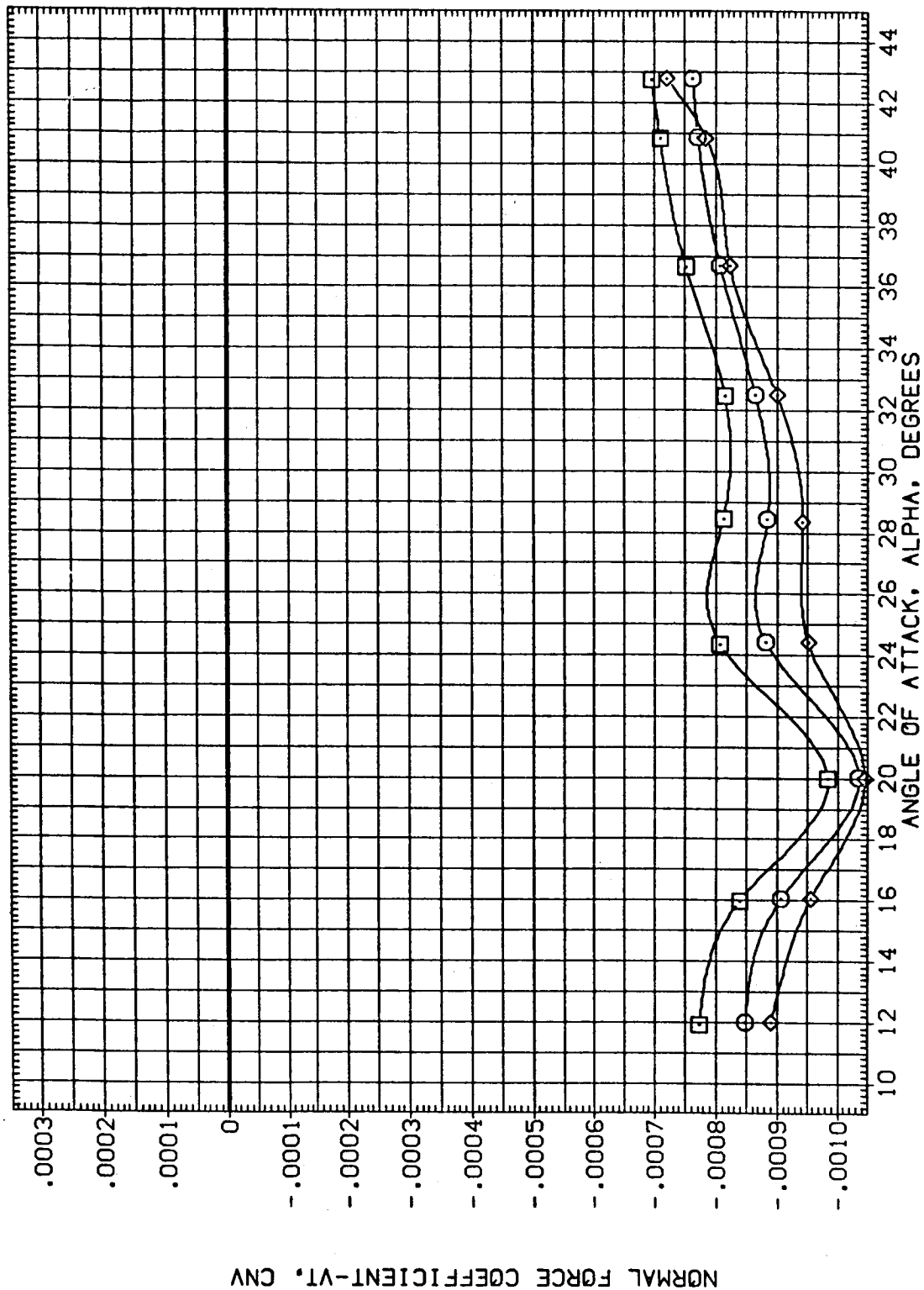


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(BEG001)	AVES 3.5-190 GA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEG002)	AVES 3.5-190 GA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BEG003)	AVES 3.5-190 GA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.5800 IN.
						YMRP 1076.7000 IN. XG
						ZMRP .0000 IN. YG
						SCALE 375.0000 IN. ZD

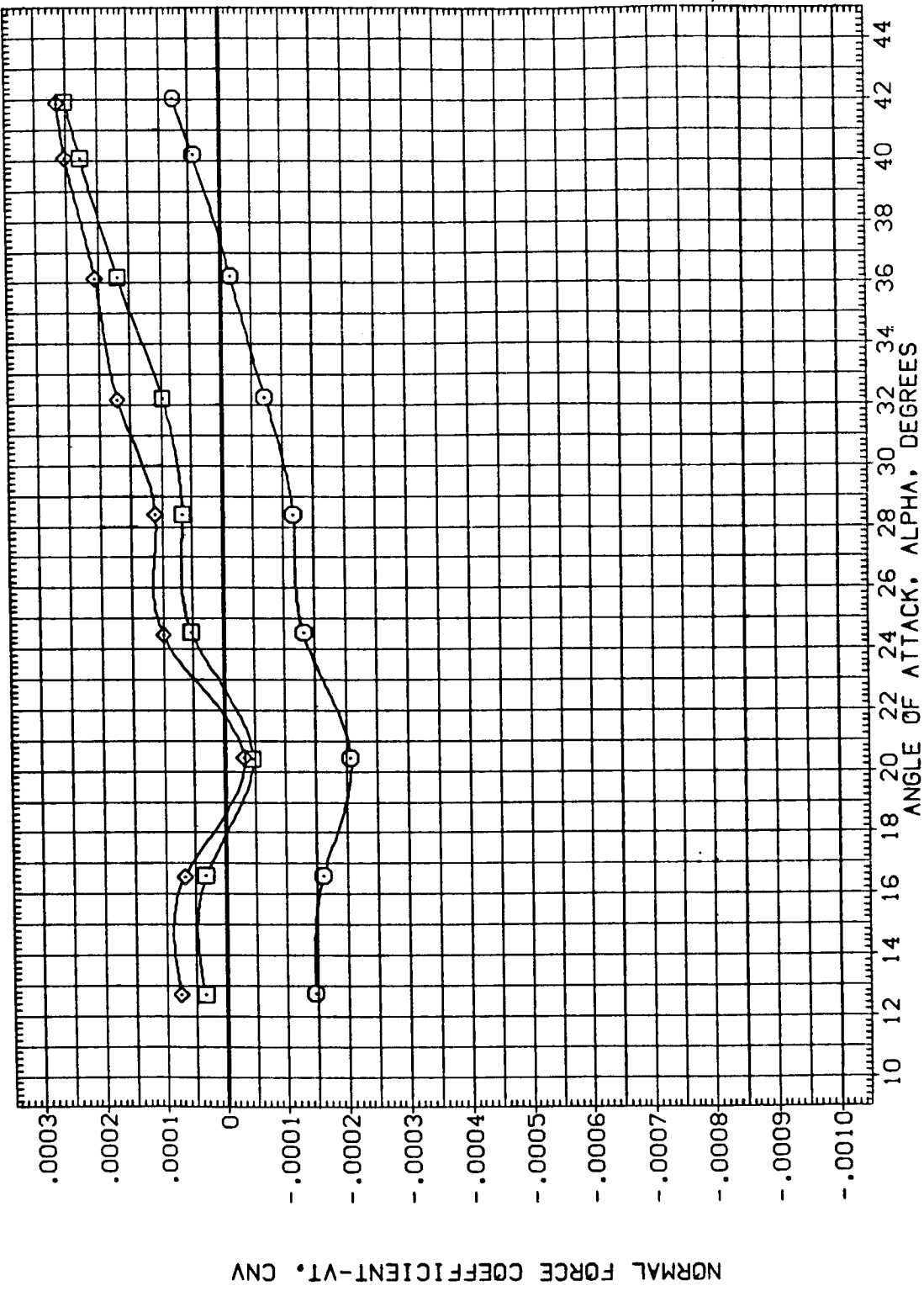


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(BE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-VT, CMVFWD

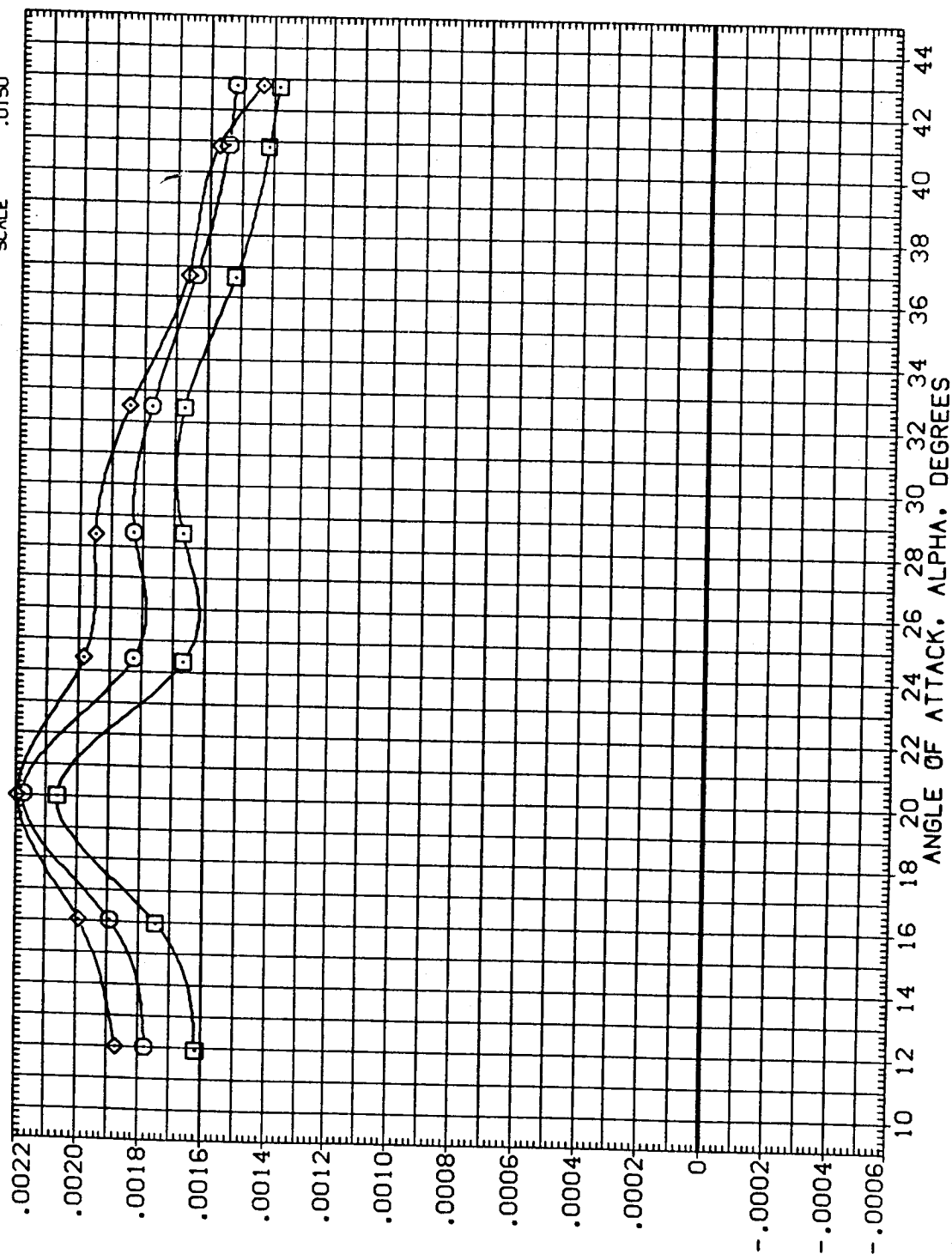


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(BE0001)    APES 3.5-190 OA98 (011-M7+M14)

(BE0002)    APES 3.5-190 OA98 (011-M7+M14)

(BE0003)    APES 3.5-190 OA98 (011-M7+M14)

BETA    ELEVON    BOFLAP    SPDBRK

.000    .000    -11.700    55.000

.000    -10.000    -11.700    55.000

.000    -40.000    -11.700    55.000

REFERENCE INFORMATION

SREF    2690.0000    SQ.FT.

REF    474.8000    IN.

BREF    936.8800    IN.

XMRP    1076.7000    IN.X0

YMRP    .0000    IN.Y0

ZMRP    375.0000    IN.Z0

SCALE    .0150

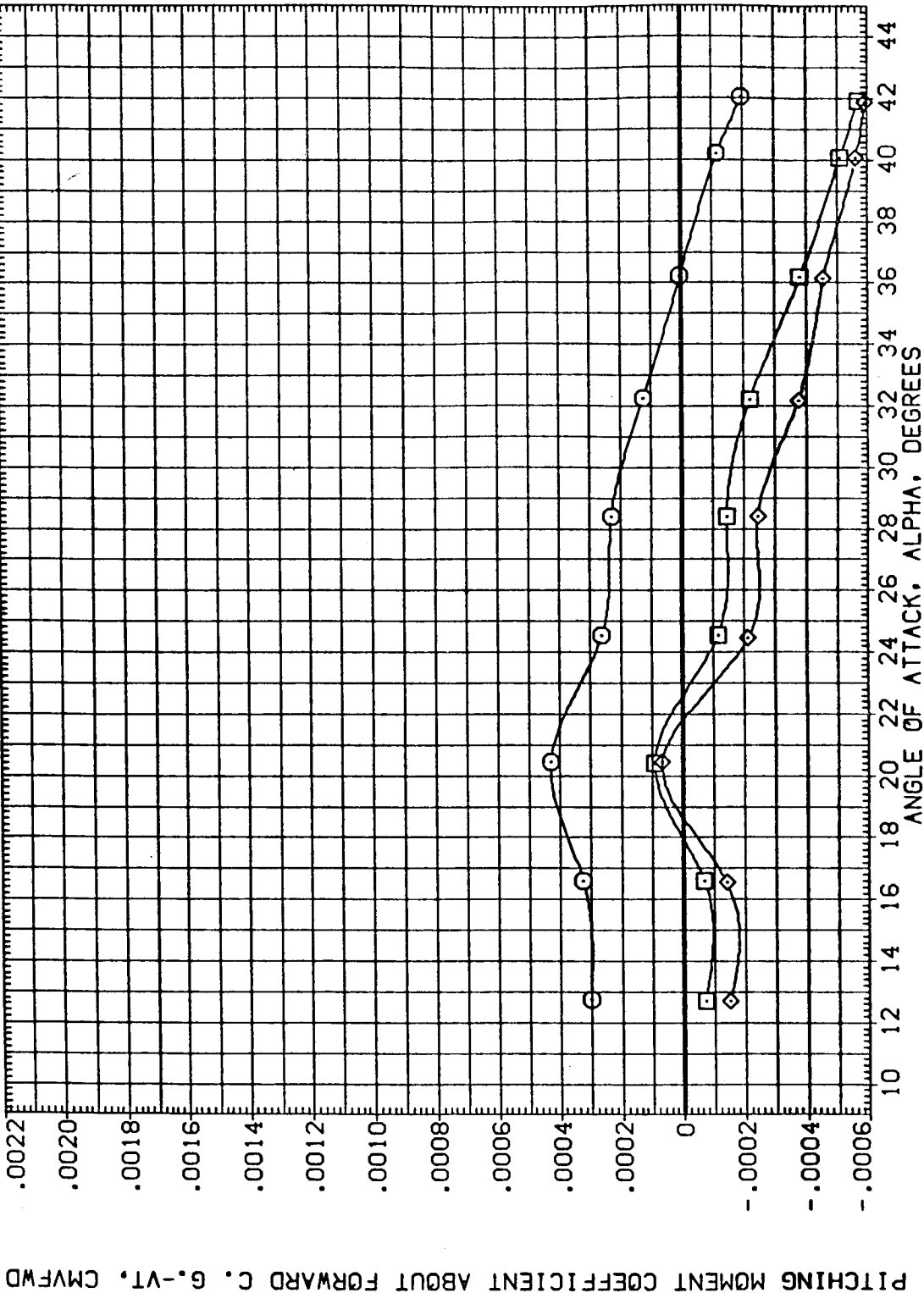


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BE0001) AMES 3.5-190 GA98 (011-M7-M14)  
 (BE0002) AMES 3.5-190 GA98 (011-M7-M14)  
 (BE0003) AMES 3.5-190 GA98 (011-M7-M14)

BETA ELEVON BOFLAP SPOBRK  
 .000 .000 -11.700 55.000  
 .000 -10.000 -11.700 55.000  
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

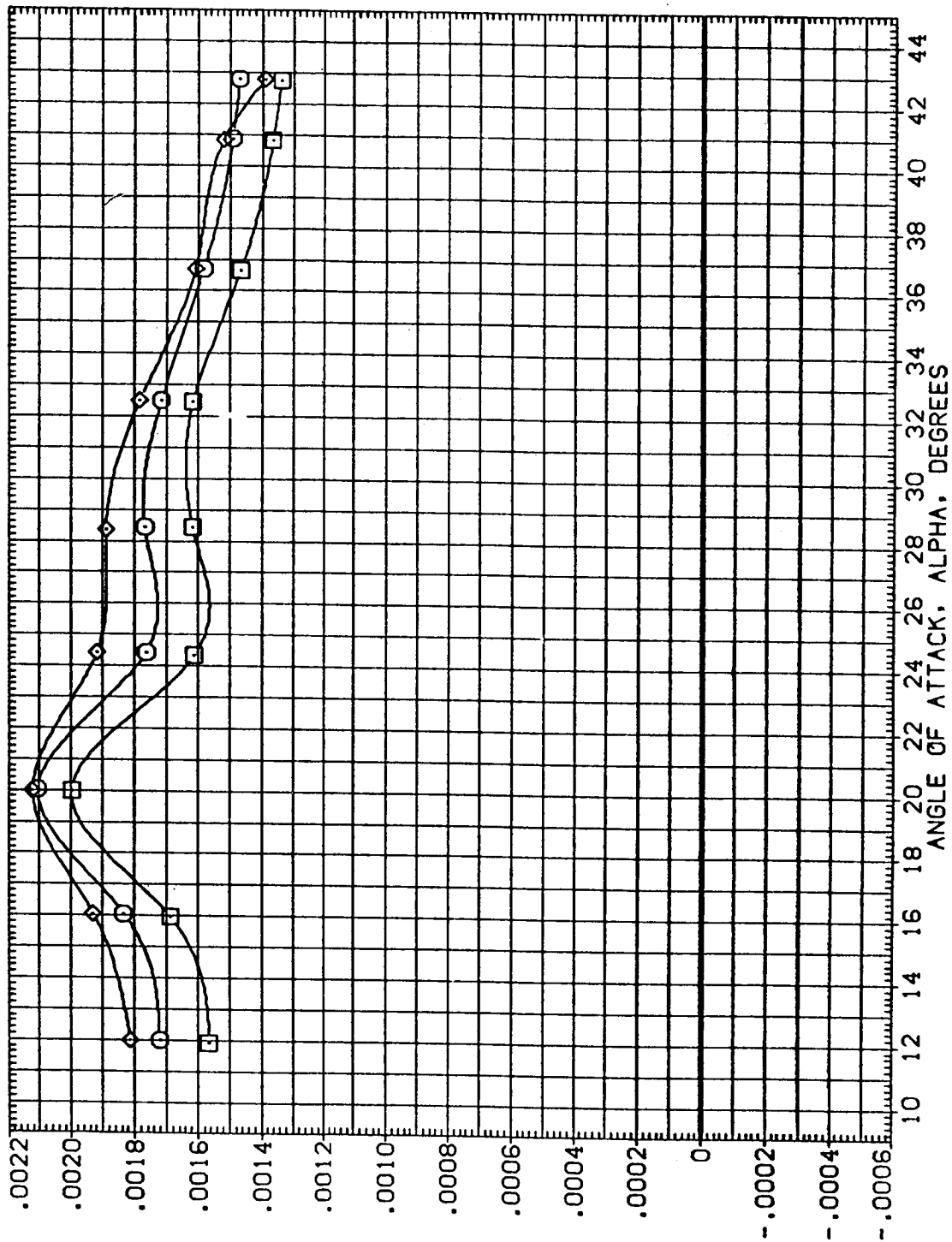


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(BE0001)    AMES 3.5-190 GA98 (011-M7+M14)

(BE0002)    AMES 3.5-190 GA98 (011-M7+M14)

(BE0003)    AMES 3.5-190 GA98 (011-M7+M14)

BETA    ELEVON    BOFLAP    SPOBRK

.000    .000    -11.700    55.000

.000    -10.000    -11.700    55.000

.000    -40.000    -11.700    55.000

REFERENCE INFORMATION

SREF    2650.0000    SQ.FT.

LREF    474.8000    IN.

BREF    936.6800    IN.

XMRP    1076.7000    IN.X0

YMRP    .0000    IN.Y0

ZMRP    375.0000    IN.Z0

SCALE    .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

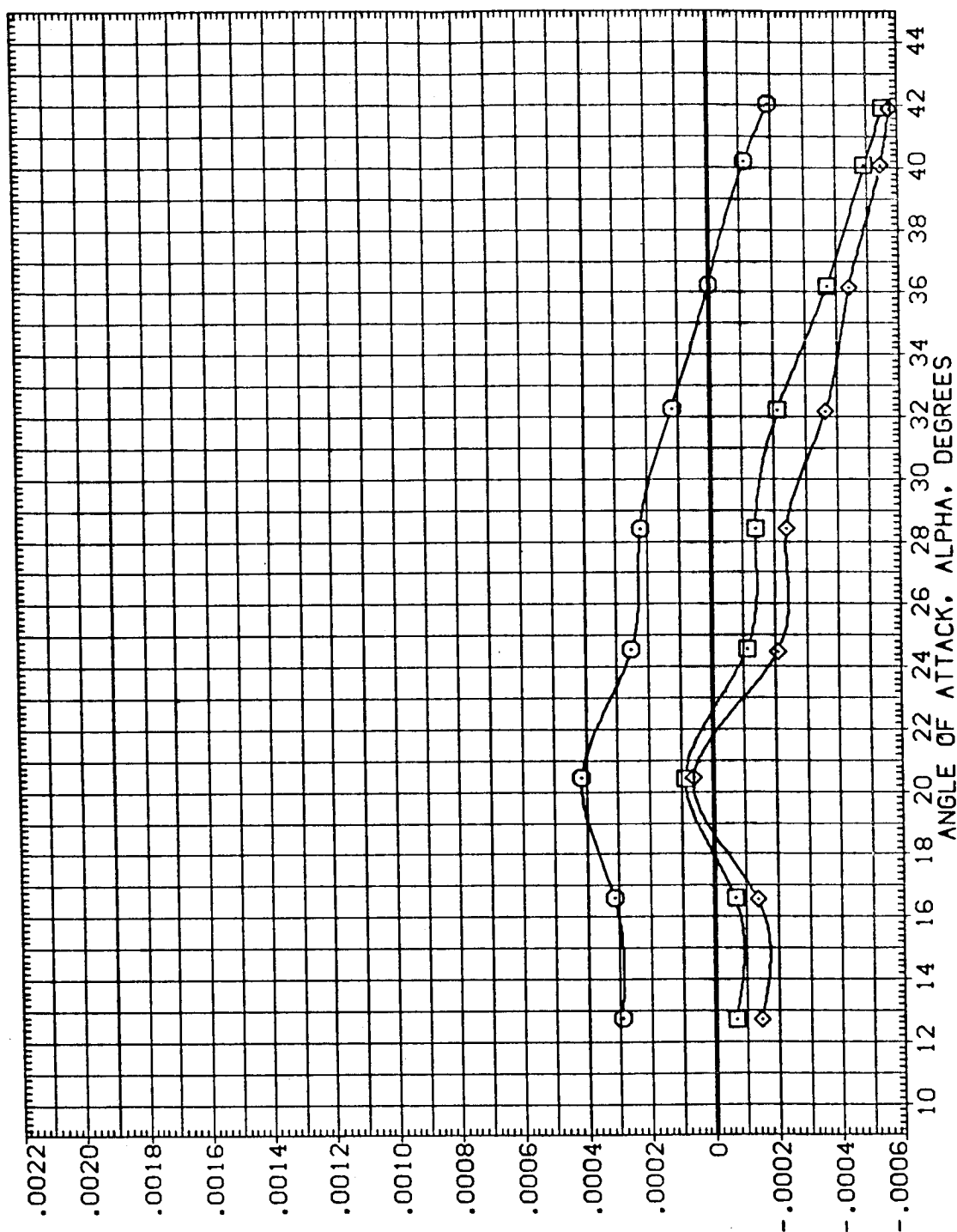


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CE0009)	AMES 3.5-190 OASB (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AMES 3.5-190 OASB (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0011)	AMES 3.5-190 OASB (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.Y0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Y0
						SCALE .0150

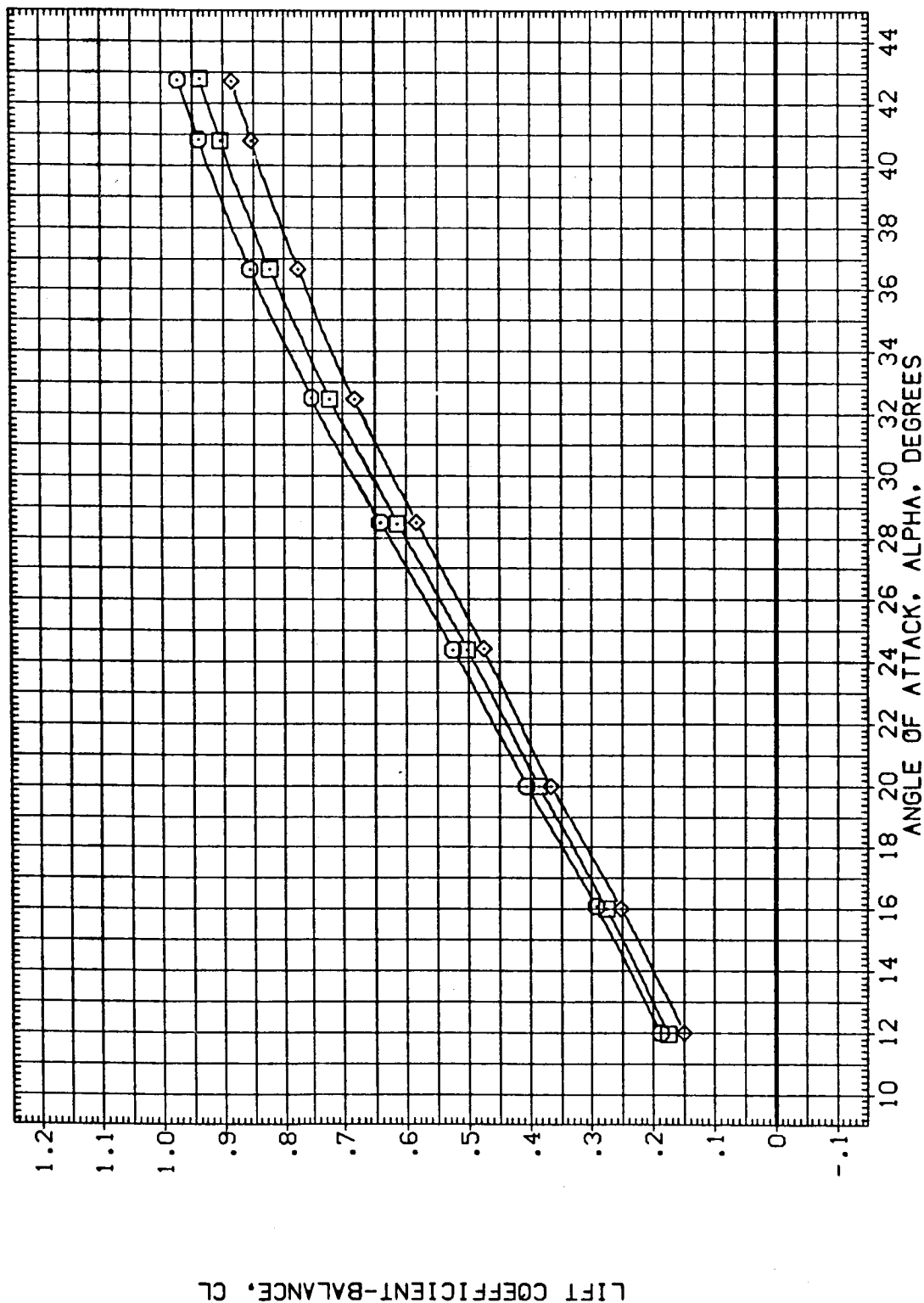


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 5.25

DATA SET SYMBOL      CONFIGURATION DESCRIPTION  
 (CE0009)      AMES 3.5-190 GA98 (011-M7+M14-N24)  
 (CE0010)      AMES 3.5-190 GA98 (011-M7+M14-N24)  
 (CE0011)      AMES 3.5-190 GA98 (011-M7+M14-N24)

BETA      ELEVON      BOFLAP      SPOBRK  
 .000      .000      -11.700      55.000  
 .000      -10.000      -11.700      55.000  
 .000      -40.000      -11.700      55.000

REFERENCE INFORMATION  
 SREF      2690.0000      SQ.FT.  
 LREF      474.8000      IN.  
 BREF      936.6800      IN.  
 XMRP      1076.7000      IN.X0  
 YMRP      .0000      IN.Y0  
 ZMRP      375.0000      IN.Z0  
 SCALE      .0150

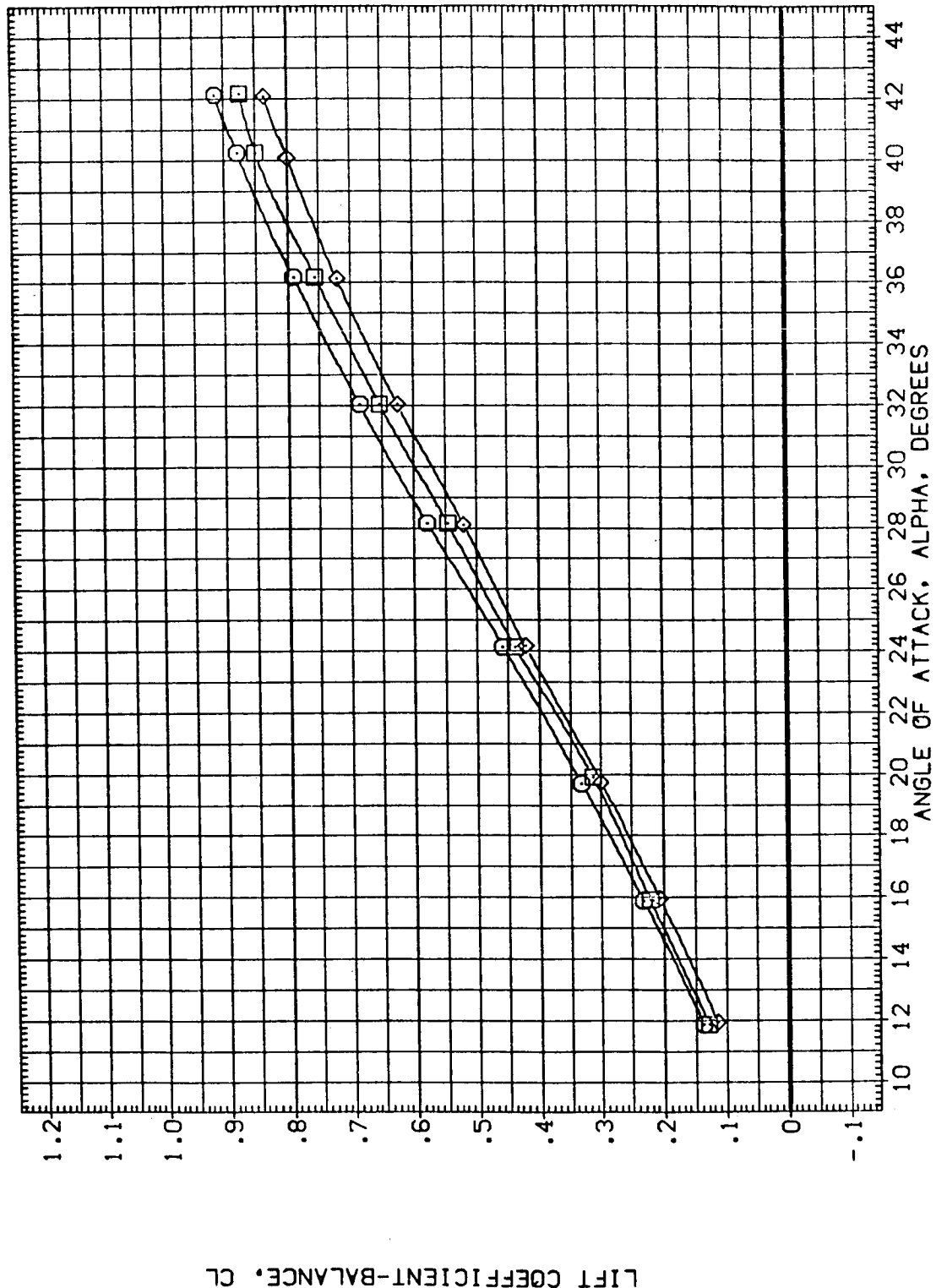


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27





DATA SET SYMBOL      CONFIGURATION DESCRIPTION  
 (CE0009)      AVES 3.5-190 0A98 (011-M7+M14-N24)  
 (CE0010)      AVES 3.5-190 0A98 (011-M7+M14-N24)  
 (CE0011)      AVES 3.5-190 0A98 (011-M7+M14-N24)

BETA      ELEVON      BDF LAP      SPOBRK  
 .000      .000      -11.700      55.000  
 .000      -10.000      -11.700      55.000  
 .000      -40.000      -11.700      55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

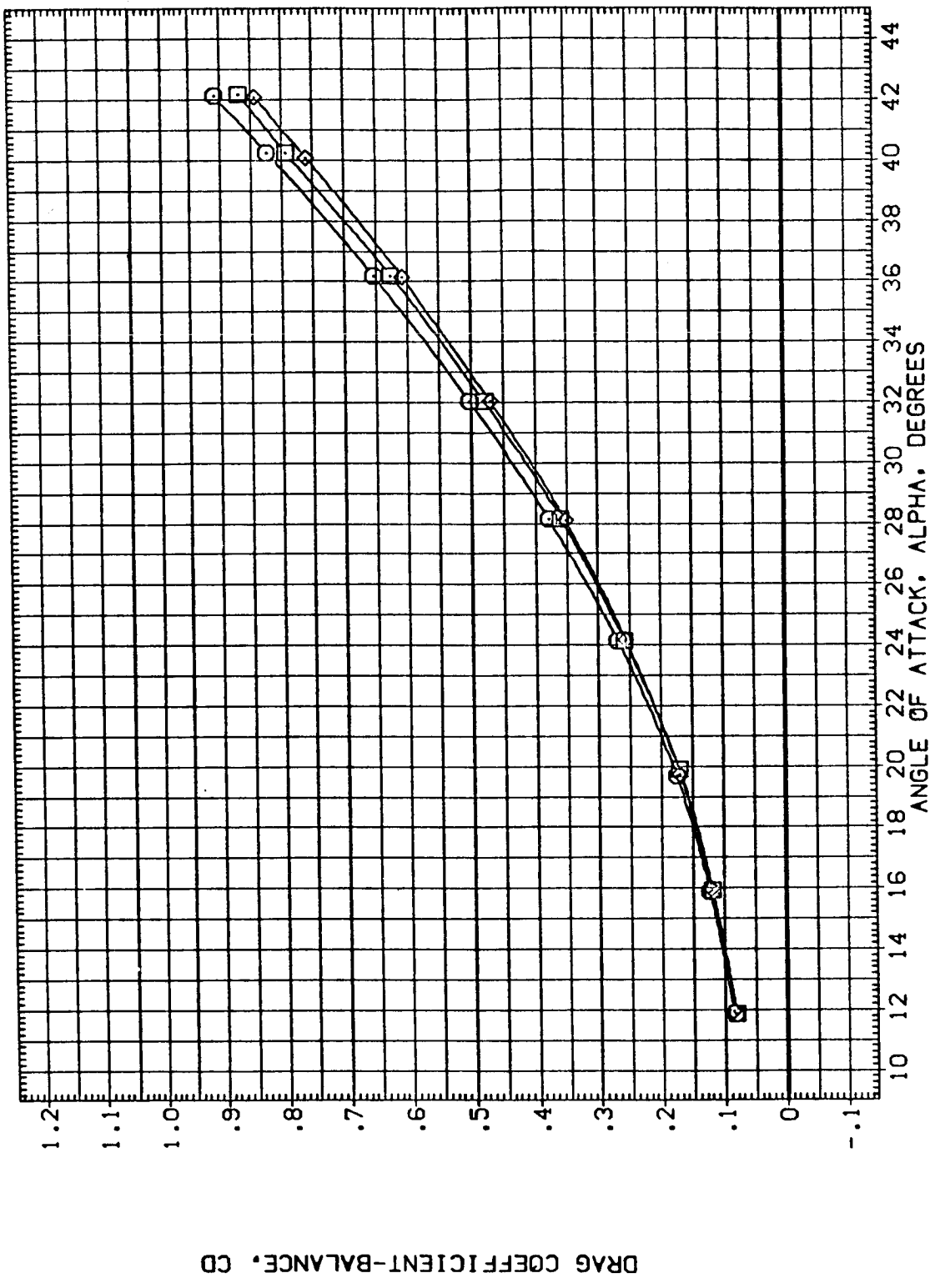


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (B)MACH = 10.27  
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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0009)	AVES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AVES 3.5-190 0A98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0011)	AVES 3.5-190 0A98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

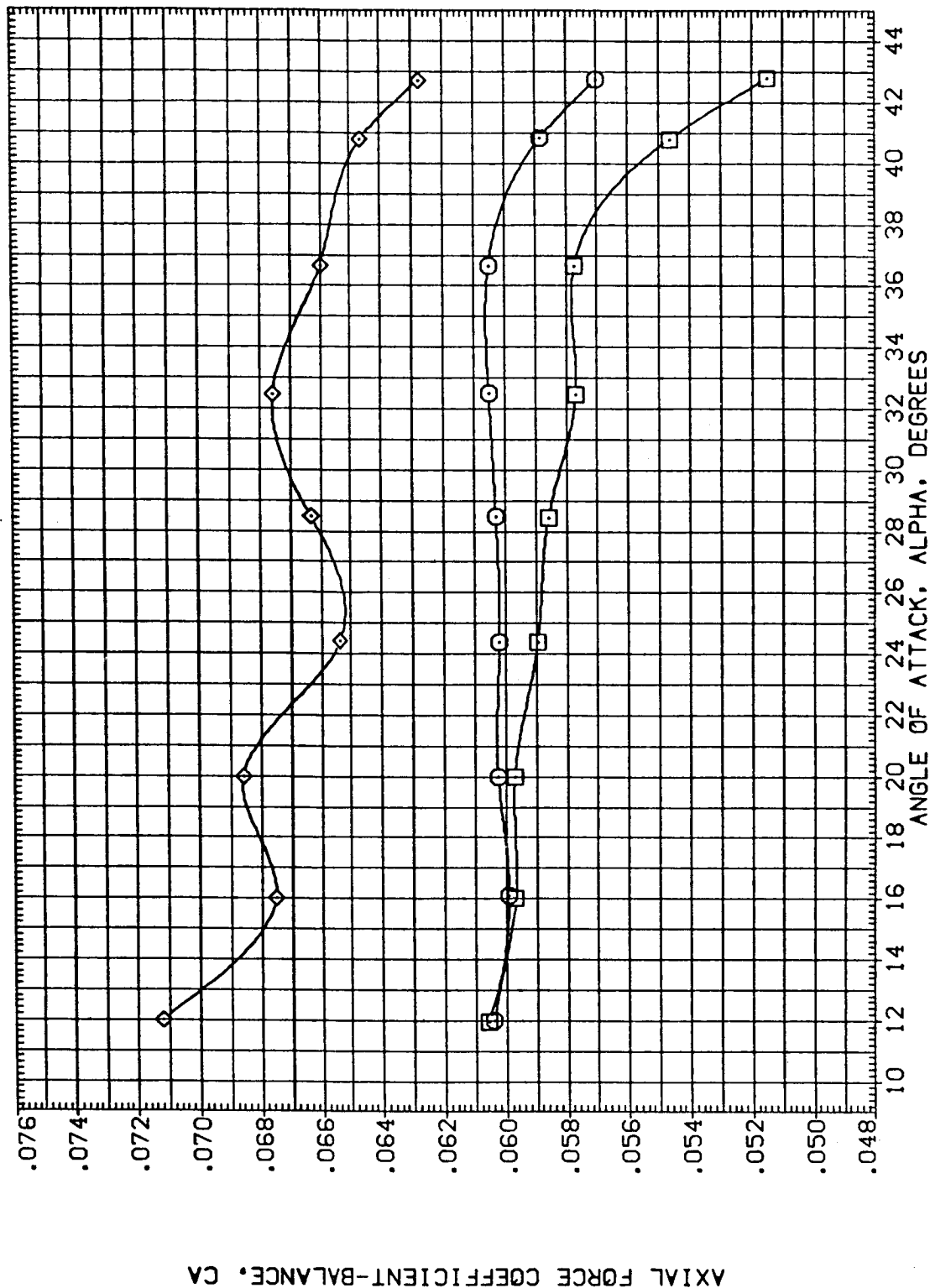


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(CE0009)    AMES 3.5-190 0A98 (011-M7-M14-N24)

(CE0010)    AMES 3.5-190 0A98 (011-M7-M14-N24)

(CE0011)    AMES 3.5-190 0A98 (011-M7-M14-N24)

BETA    ELEVON    BOFLAP    SPOBRK

.000    .000    -11.700    55.000

.000    -10.000    -11.700    55.000

.000    -40.000    -11.700    55.000

REFERENCE INFORMATION

SREF    2690.0000    SQ.FT.

LREF    474.8000    IN.

BREF    936.6800    IN.

XMRP    1076.7000    IN.X0

YMRP    .0000    IN.Y0

ZMRP    375.0000    IN.Z0

SCALE    .0150

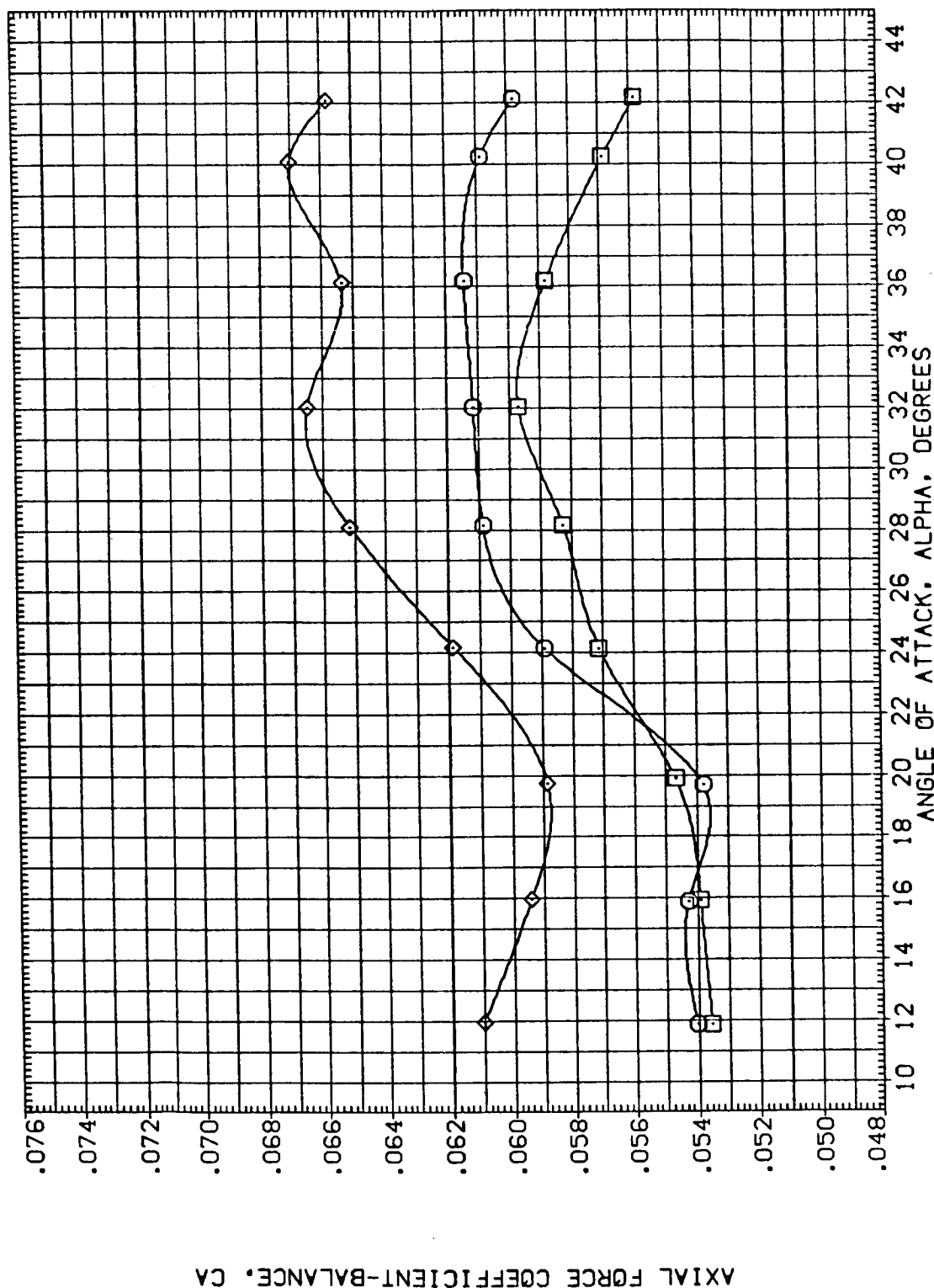


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (CE0009) AMES 3.5-190 0A98 (011-M7+M14-N24)  
 (CE0010) AMES 3.5-190 0A98 (011-M7+M14-N24)  
 (CE0011) AMES 3.5-190 0A98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK  
 .000 .000 -11.700 55.000  
 .000 -10.000 -11.700 55.000  
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 50.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

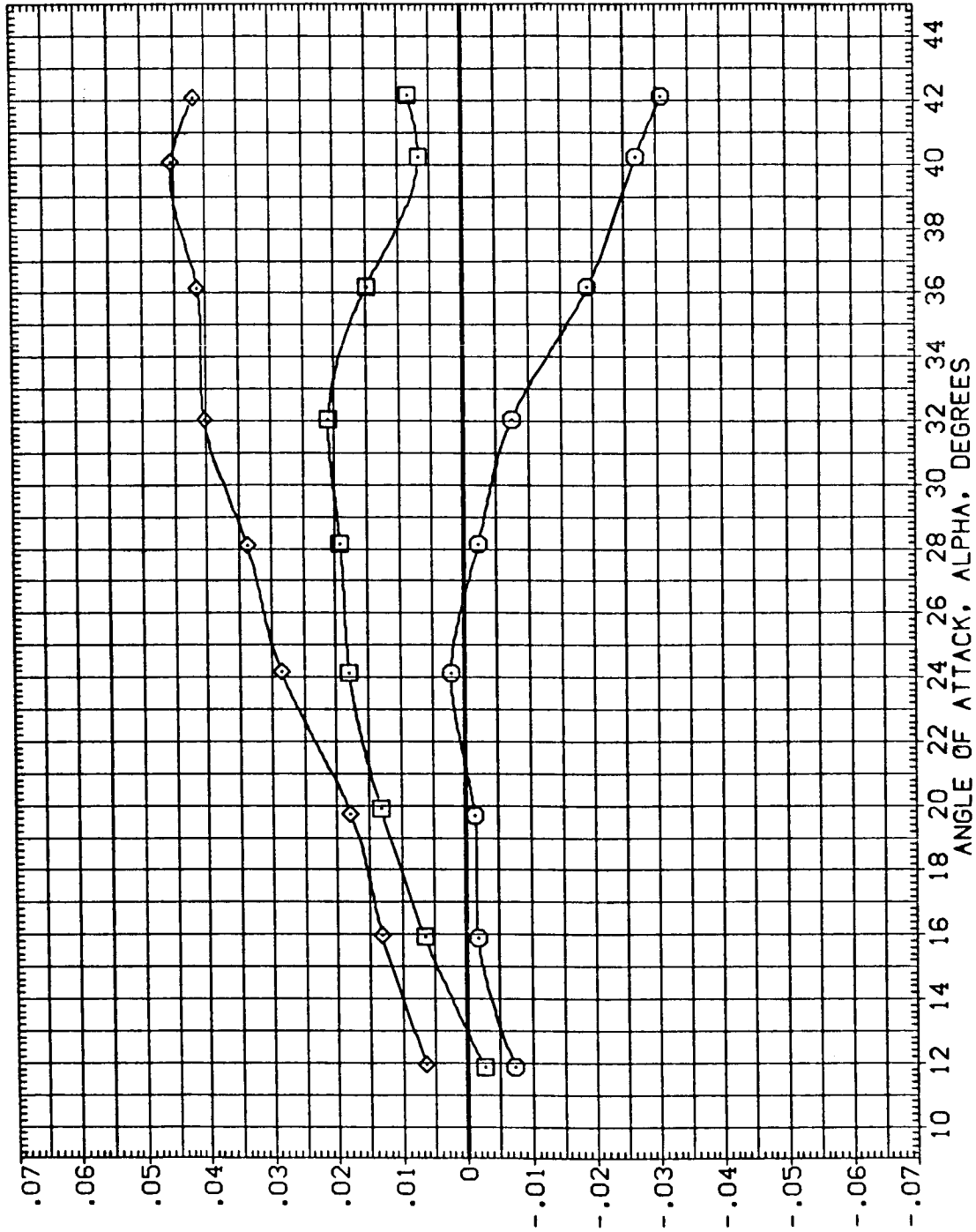


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0009)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0011)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

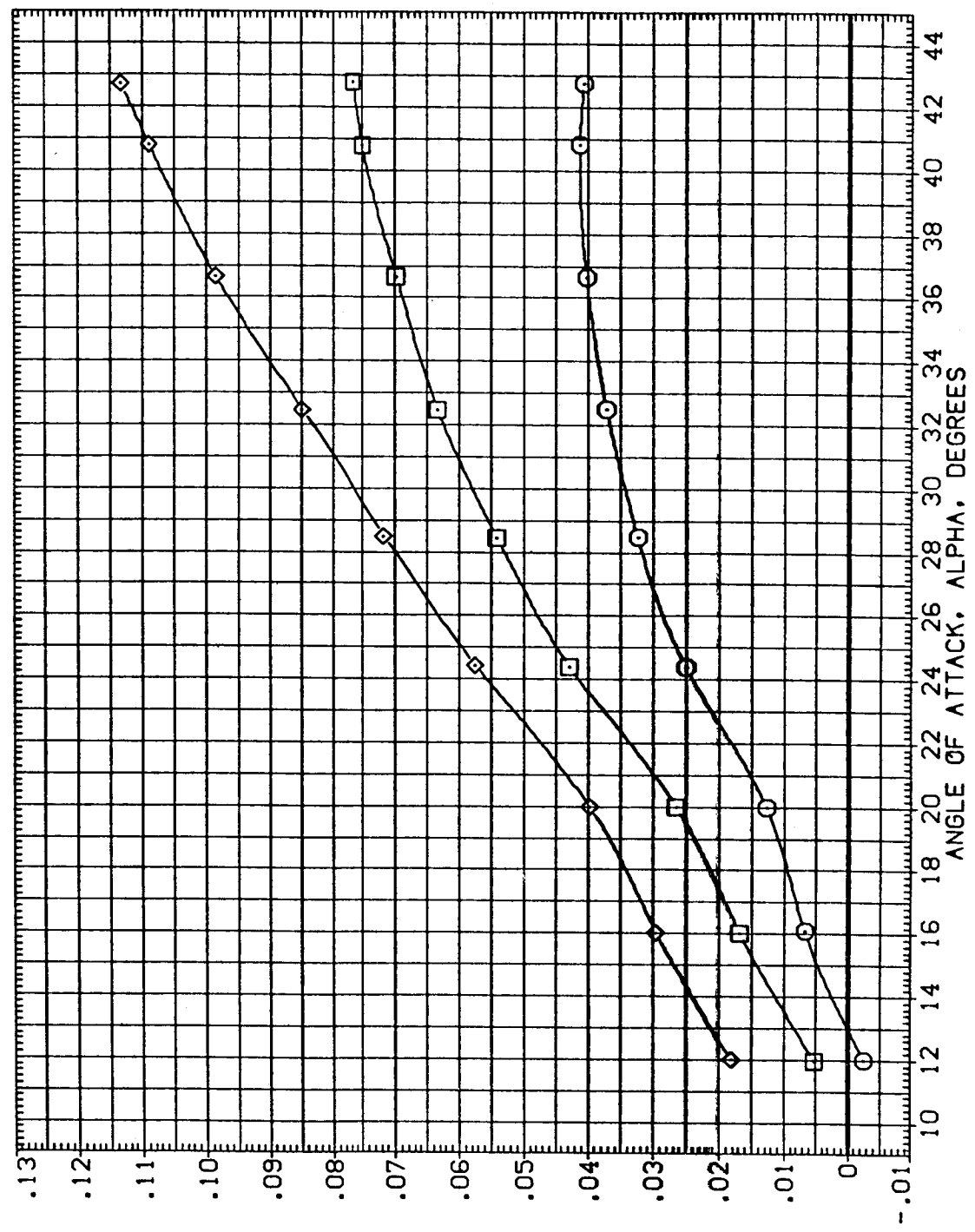


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

0.2

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (CEQ009) AMES 3.5-190 0A98 (011-M7-M14-N24)  
 (CEQ010) AMES 3.5-190 0A98 (011-M7-M14-N24)  
 (CEQ011) AMES 3.5-190 0A98 (011-M7-M14-N24)

BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION  
 .000 .000 -11.700 55.000 SREF 2690.0000 50. FT.  
 .000 -10.000 -11.700 55.000 LREF 474.8000 IN.  
 .000 -40.000 -11.700 55.000 BREF 936.6800 IN.  
 XMRP 1076.7000 IN. X0  
 YMRP .0000 IN. Y0  
 ZMRP 375.0000 IN. Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

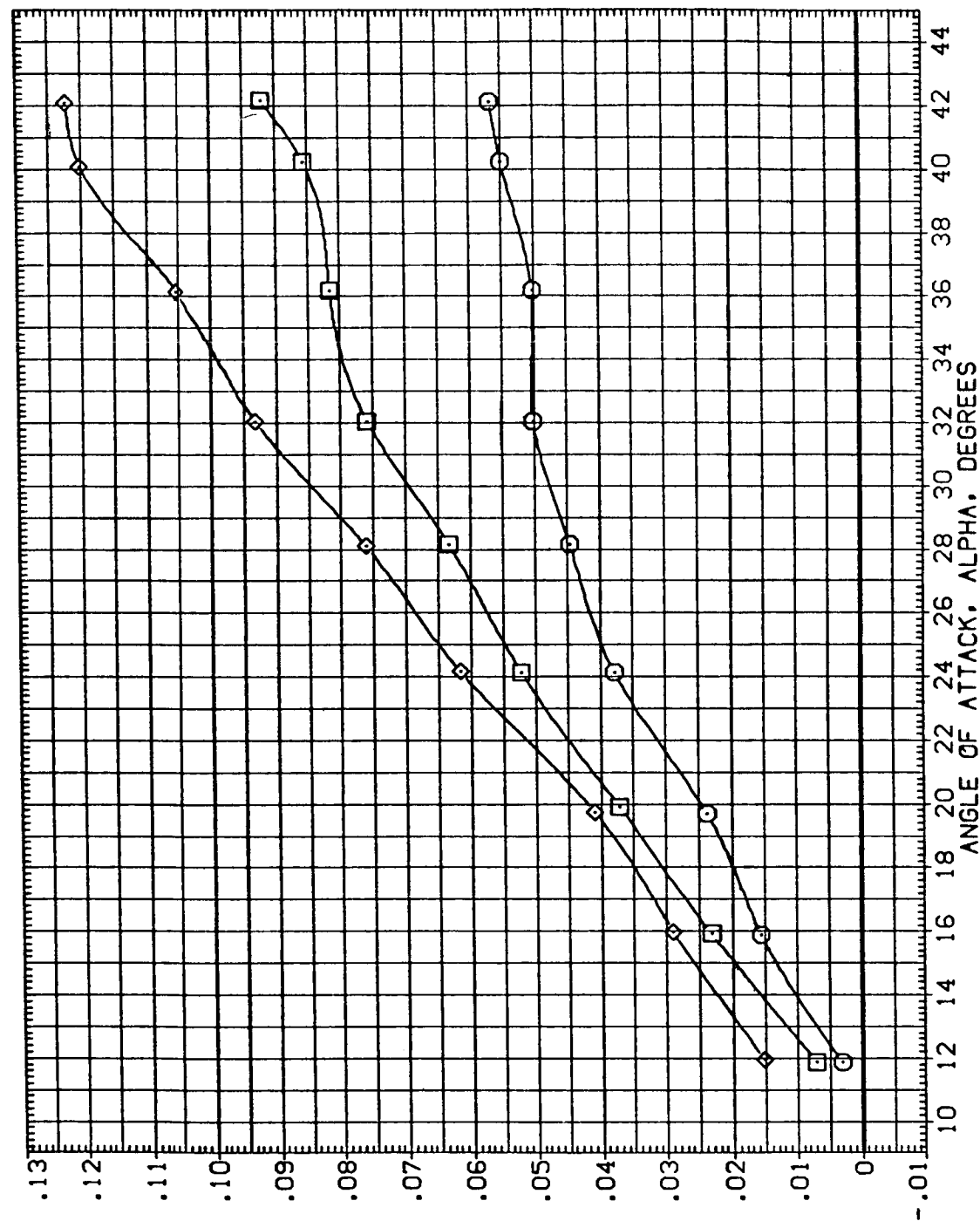


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL    CONFIGURATION DESCRIPTION    REFERENCE INFORMATION

(CE0009)	AMES 3.5-190 0A98 (011-M7-M14-N24)	SREF	2690.0000	50.FT.
(CE0010)	AMES 3.5-190 0A98 (011-M7-M14-N24)	LREF	474.8000	IN.
(CE0011)	AMES 3.5-190 0A98 (011-M7-M14-N24)	BREF	936.6800	IN.
		YMRP	1076.7000	IN.X0
		ZMRP	0000	IN.Y0
		ZMRP	375.0000	IN.Z0
		SCALE	.0150	

BETA    ELEVON    BOFLAP    SPOBRK

.000	.000	-11.700	55.000
.000	-10.000	-11.700	55.000
.000	-40.000	-11.700	55.000

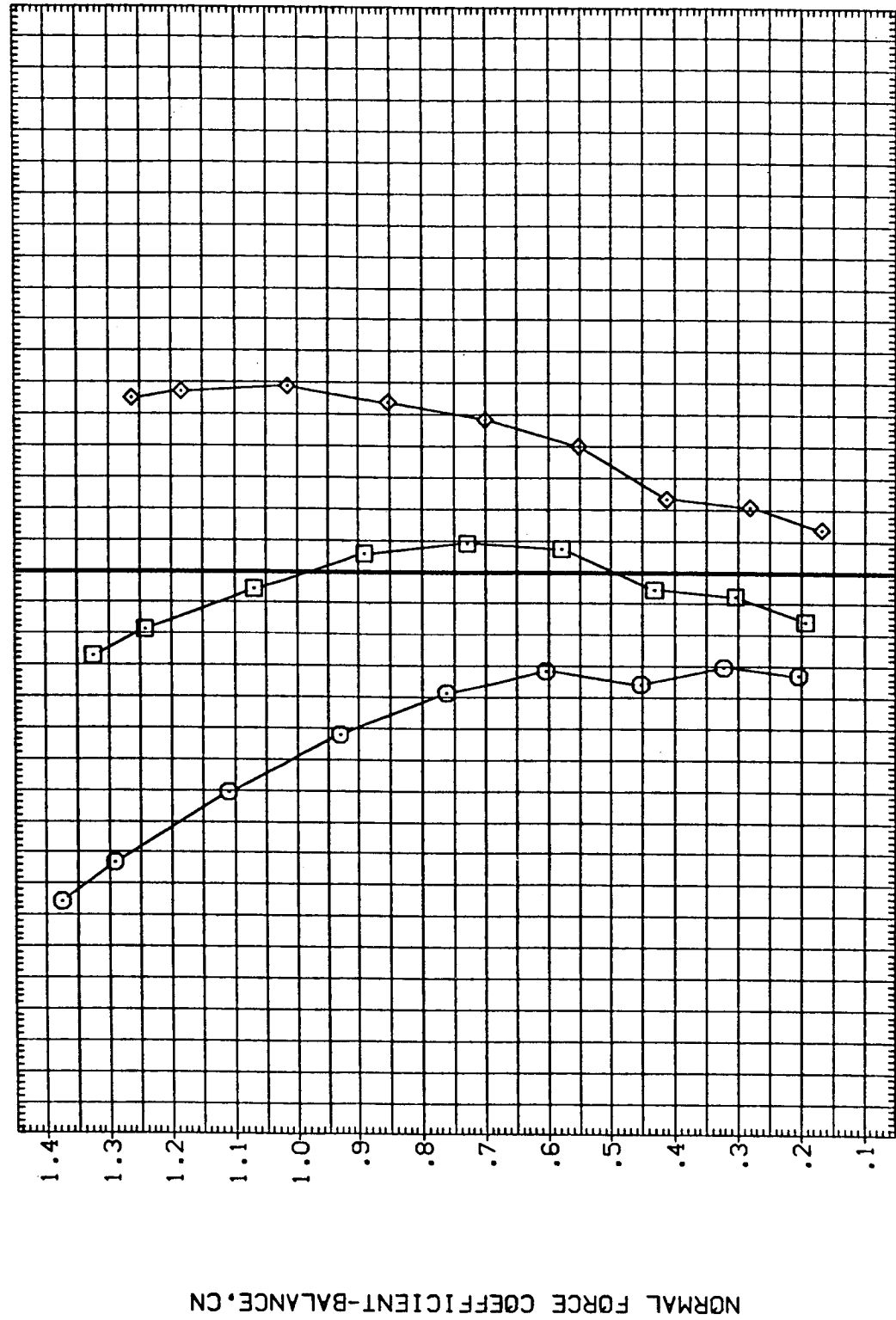
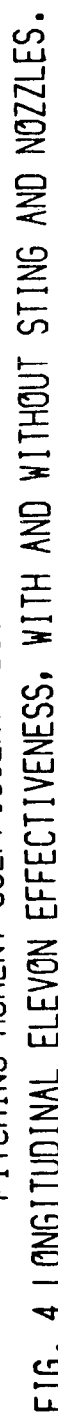


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
CEQ009	AMES 3.5-190 QAS8 (011-M7-M14-N24)
CEQ010	AMES 3.5-190 QAS8 (011-M7-M14-N24)
CEQ011	AMES 3.5-190 QAS8 (011-M7-M14-N24)



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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0009)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0011)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

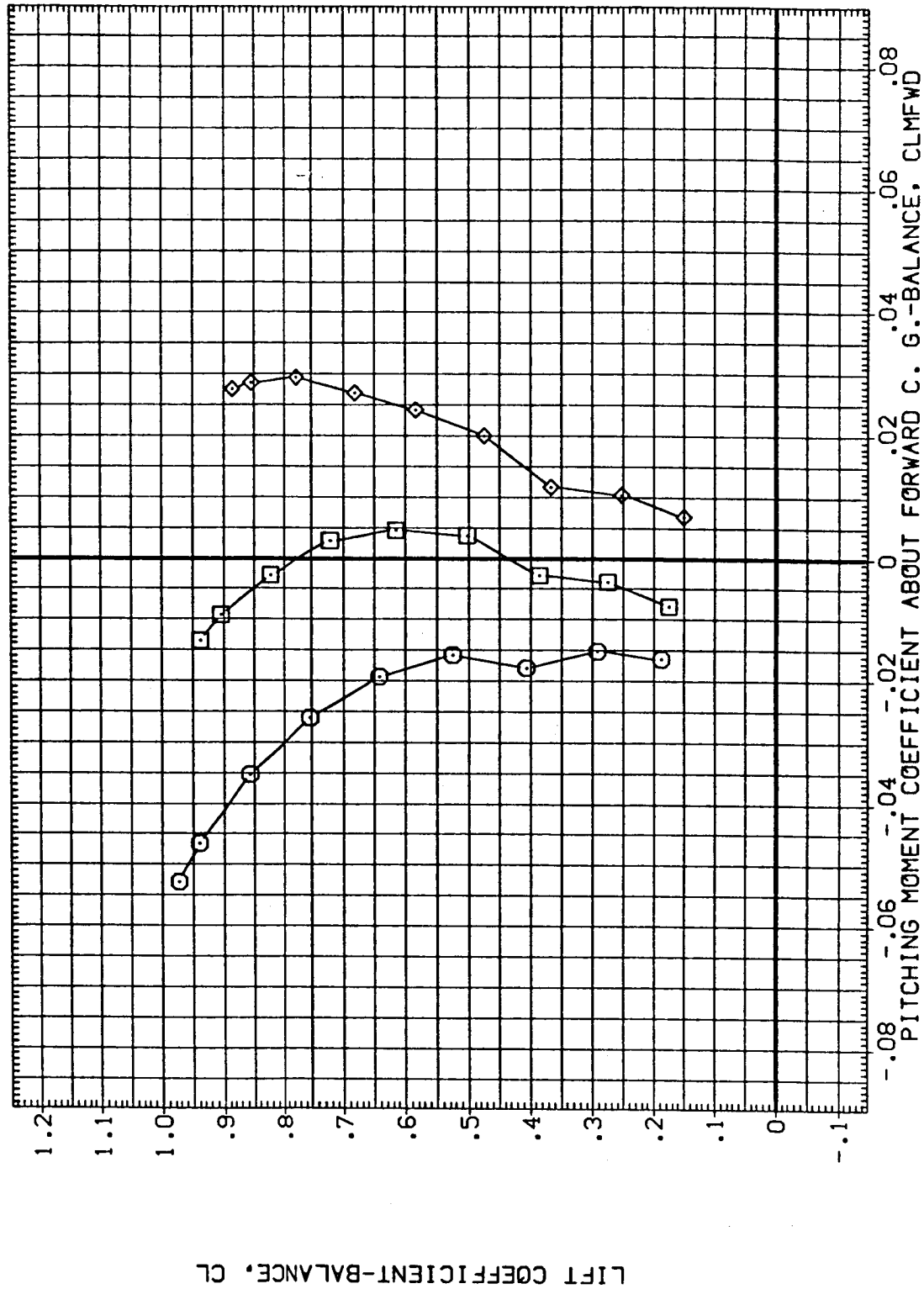


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(CE0008)    AMES 3.5-190 GA98 (011-M7-M14-N24)

(CE0010)    AMES 3.5-190 GA98 (011-M7-M14-N24)

(CE0011)    AMES 3.5-190 GA98 (011-M7-M14-N24)

BETA    ELEVON    BOFLAP    SPOBRK

.000    .000    -11.700    55.000

.000    -10.000    -11.700    55.000

.000    -40.000    -11.700    55.000

REFERENCE INFORMATION

SREF    2690.0000    SQ.FT.

LREF    474.8000    IN.

BREF    936.6800    IN.

XMRP    1076.7000    IN.X0

YMRP    .0000    IN.Y0

ZMRP    375.0000    IN.Z0

SCALE    .0150

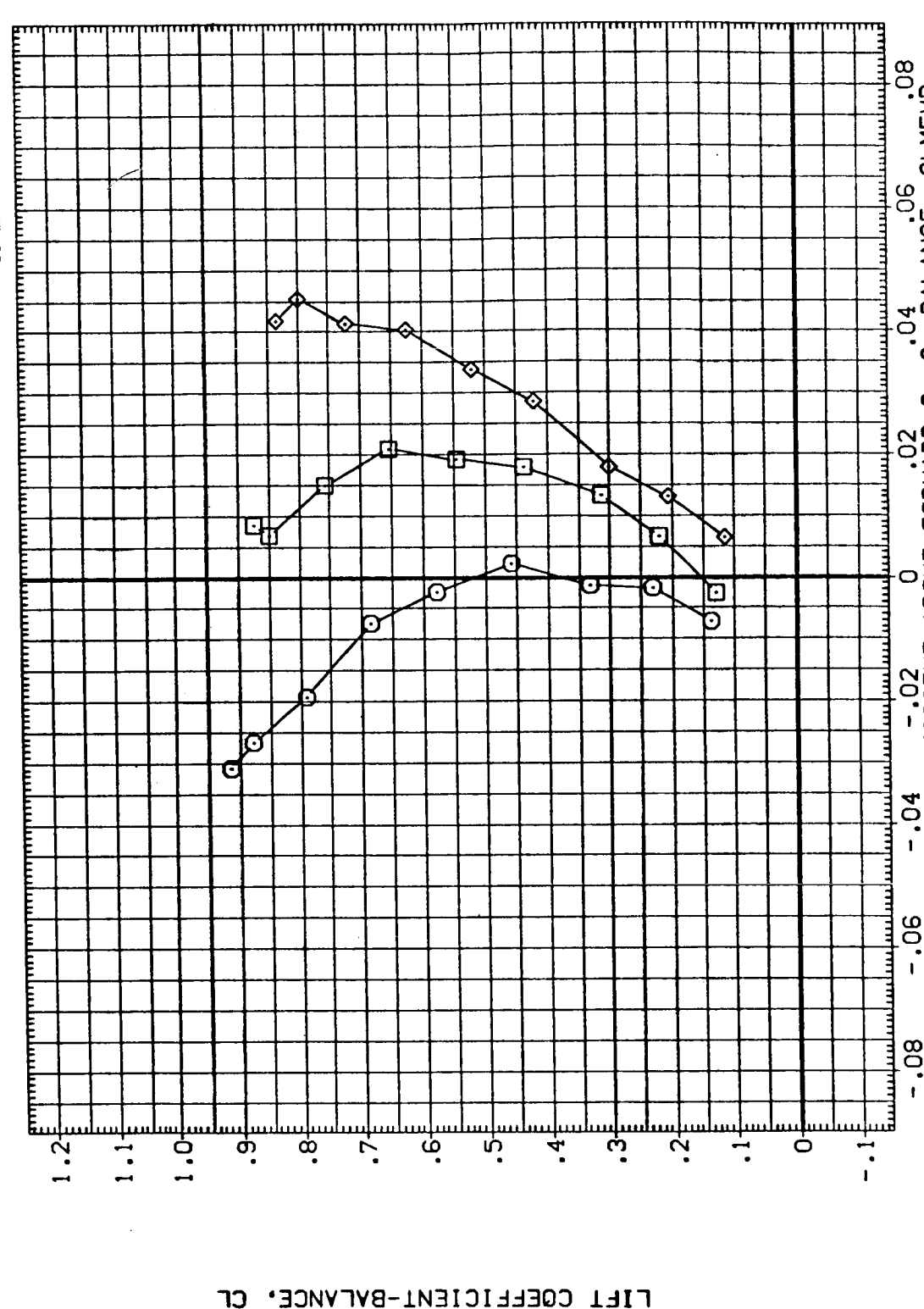


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(B)MACH = 10.27

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (CE0009)    AMES 3.5-190 OA98 (011-M7-M14-N24)  
 (CE0010)    AMES 3.5-190 OA98 (011-M7-M14-N24)  
 (CE0011)    AMES 3.5-190 OA98 (011-M7-M14-N24)

BETA    ELEVON    BOFLAP    SPD8RK

REFERENCE INFORMATION  
 SREF    2690.0000    SQ.FT.  
 LREF    474.8000    IN.  
 BREF    936.6800    IN.  
 XMRP    1076.7000    IN. X0  
 YMRP    .0000    IN. Y0  
 ZMRP    375.0000    IN. Z0  
 SCALE    .0150

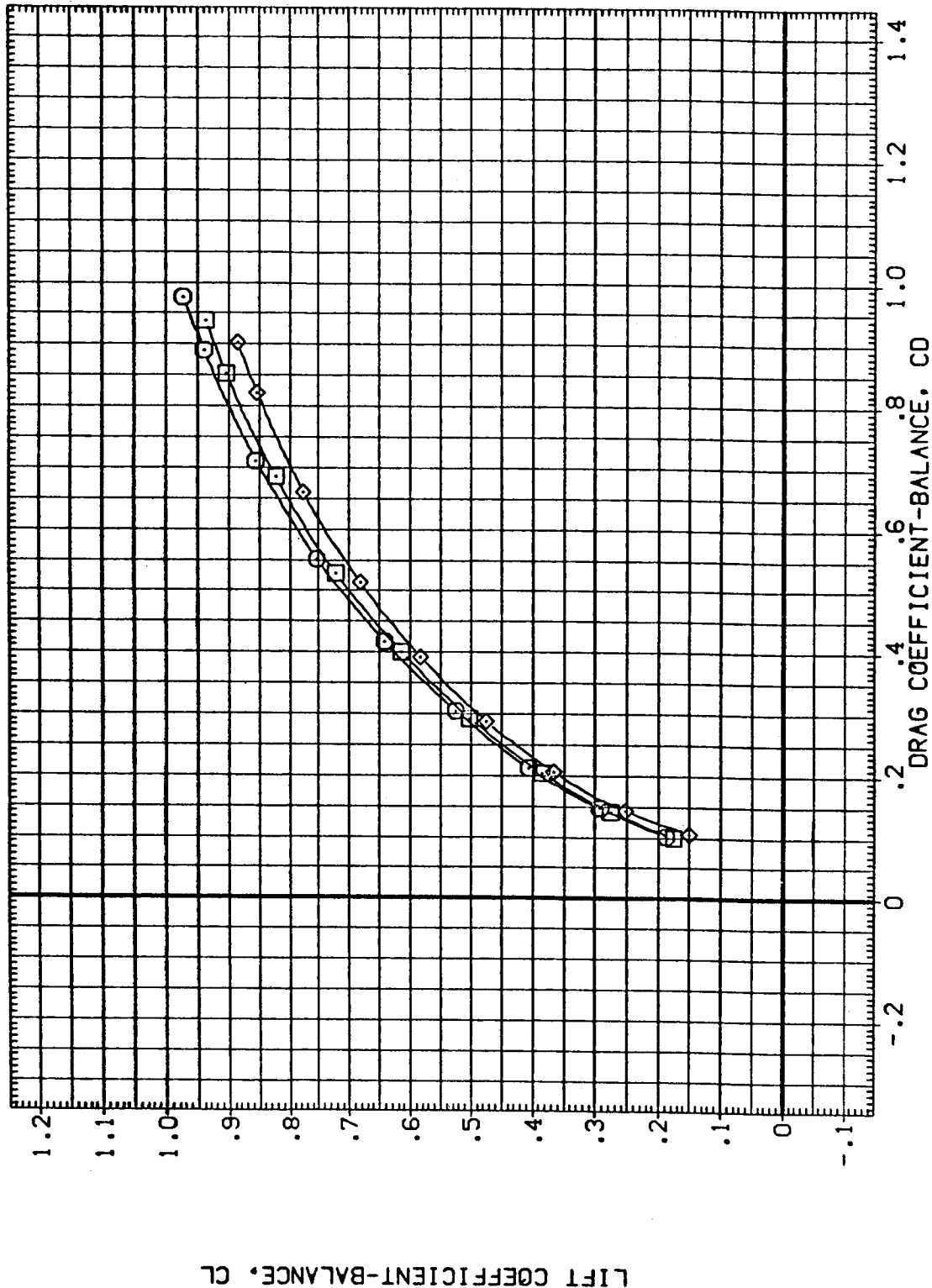


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
 (CE0009)  
 (CE0010)  
 (CE0011)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 OA98 (011-M7+M14-N24)  
 AMES 3.5-190 OA98 (011-M7+M14-N24)  
 AMES 3.5-190 OA98 (011-M7+M14-N24)

BETA  
 .000  
 .000  
 .000

ELEVON  
 .000  
 -10.000  
 -40.000

BOFLAP  
 -11.700  
 -11.700  
 -11.700

SPOBRK  
 55.000  
 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN. X0  
 YMRP .0000 IN. Y0  
 ZMRP 375.0000 IN. Z0  
 SCALE .0150

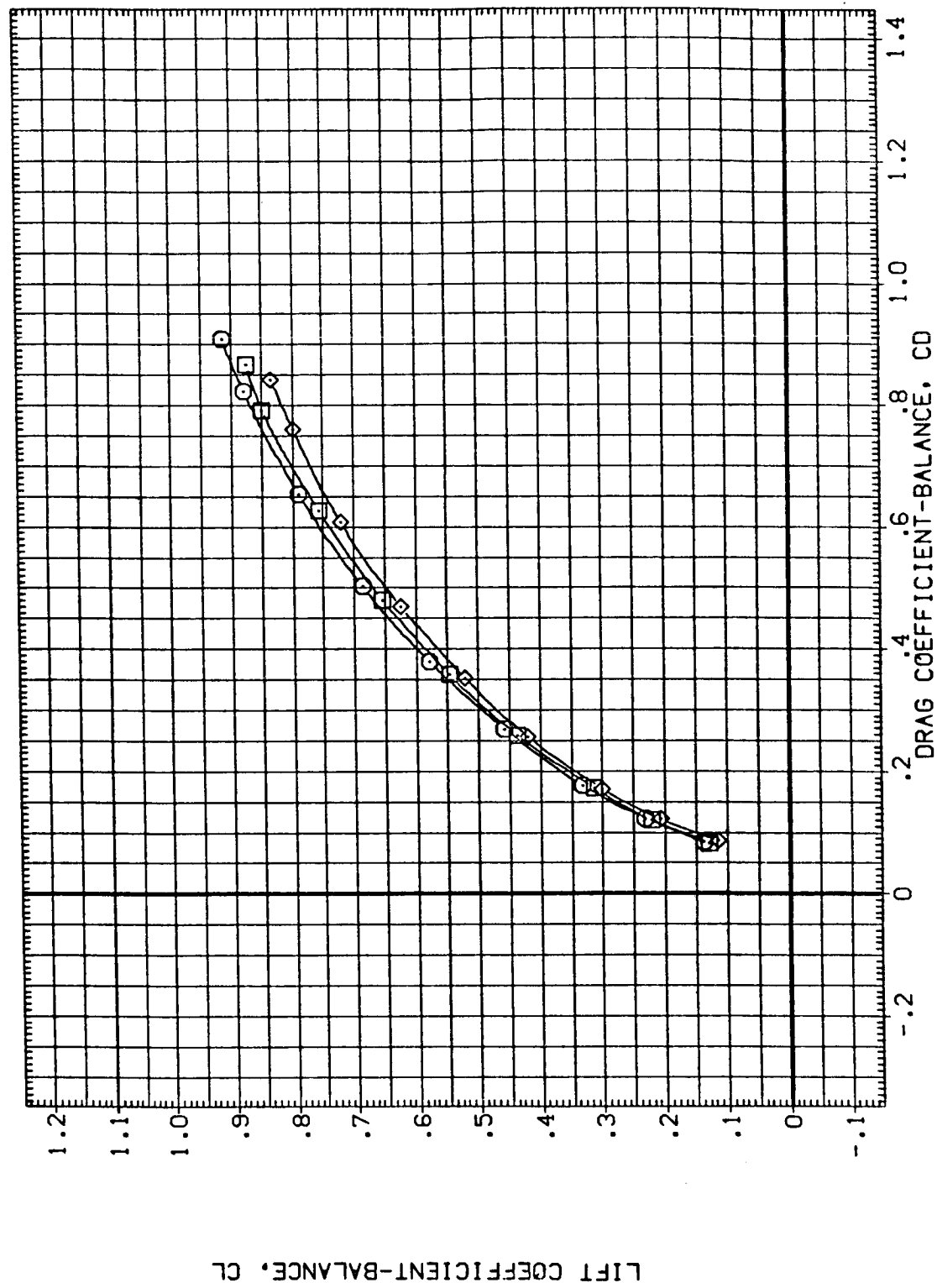


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (B)MACH = 10.27  
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DATA SET SYMBOL  
(EE0009)  
(EE0010)  
(EE0011)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M14-N24)  
AMES 3.5-190 0A98 (011-M14-N24)  
AMES 3.5-190 0A98 (011-M14-N24)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BDCLAP  
-11.700  
-11.700  
-11.700

SPDBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

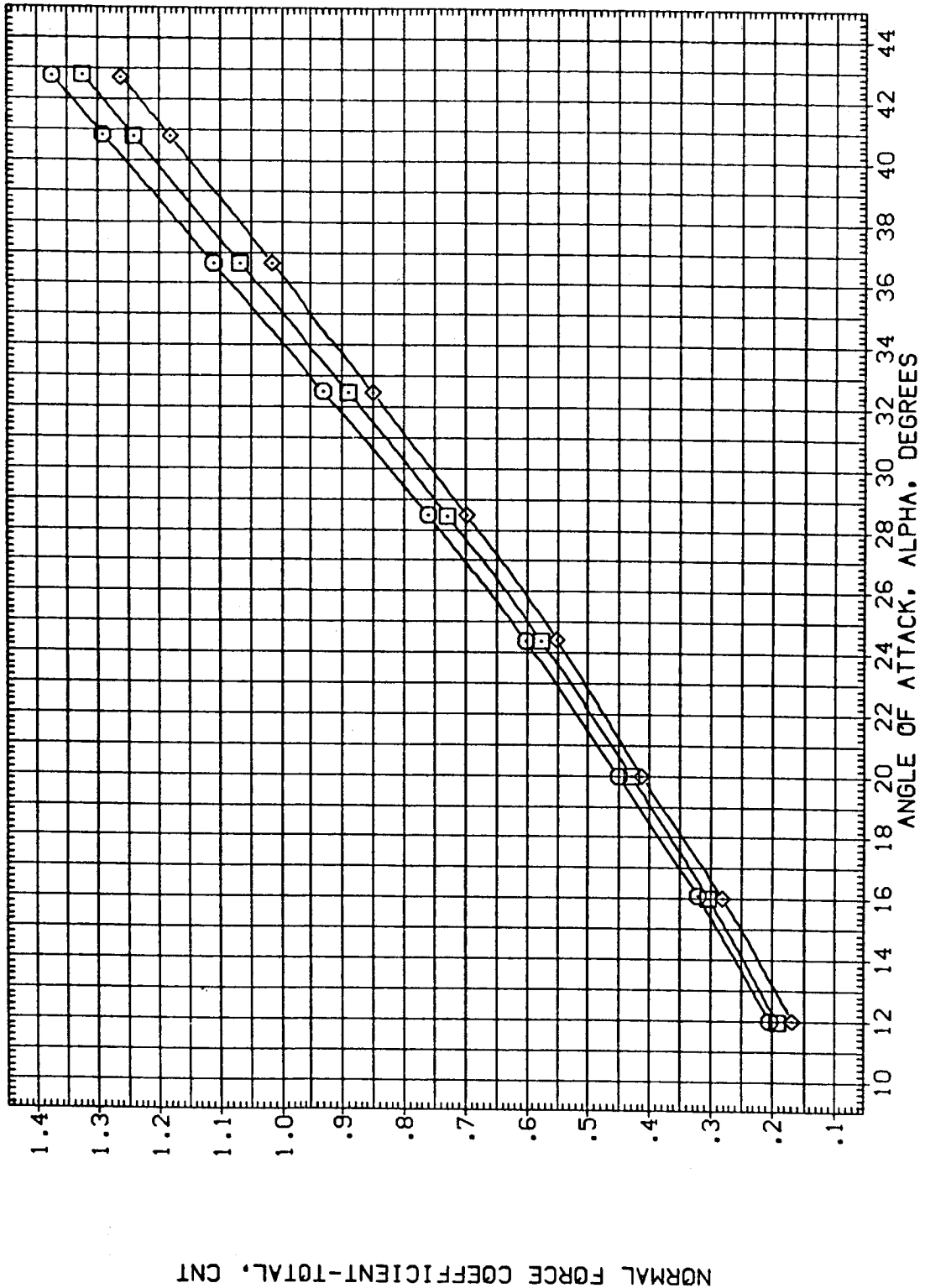


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0009)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0010)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0011)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

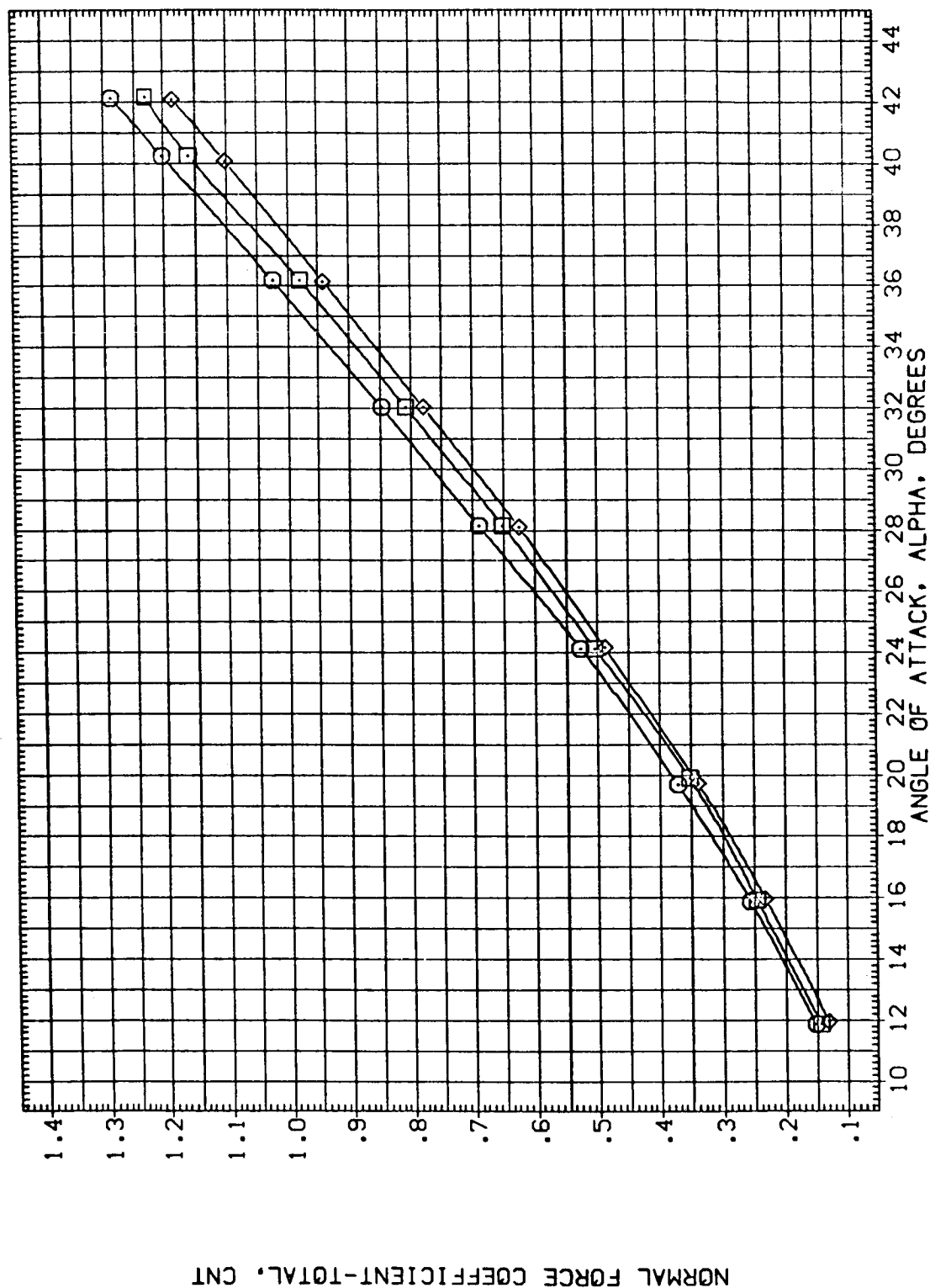


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMFWO

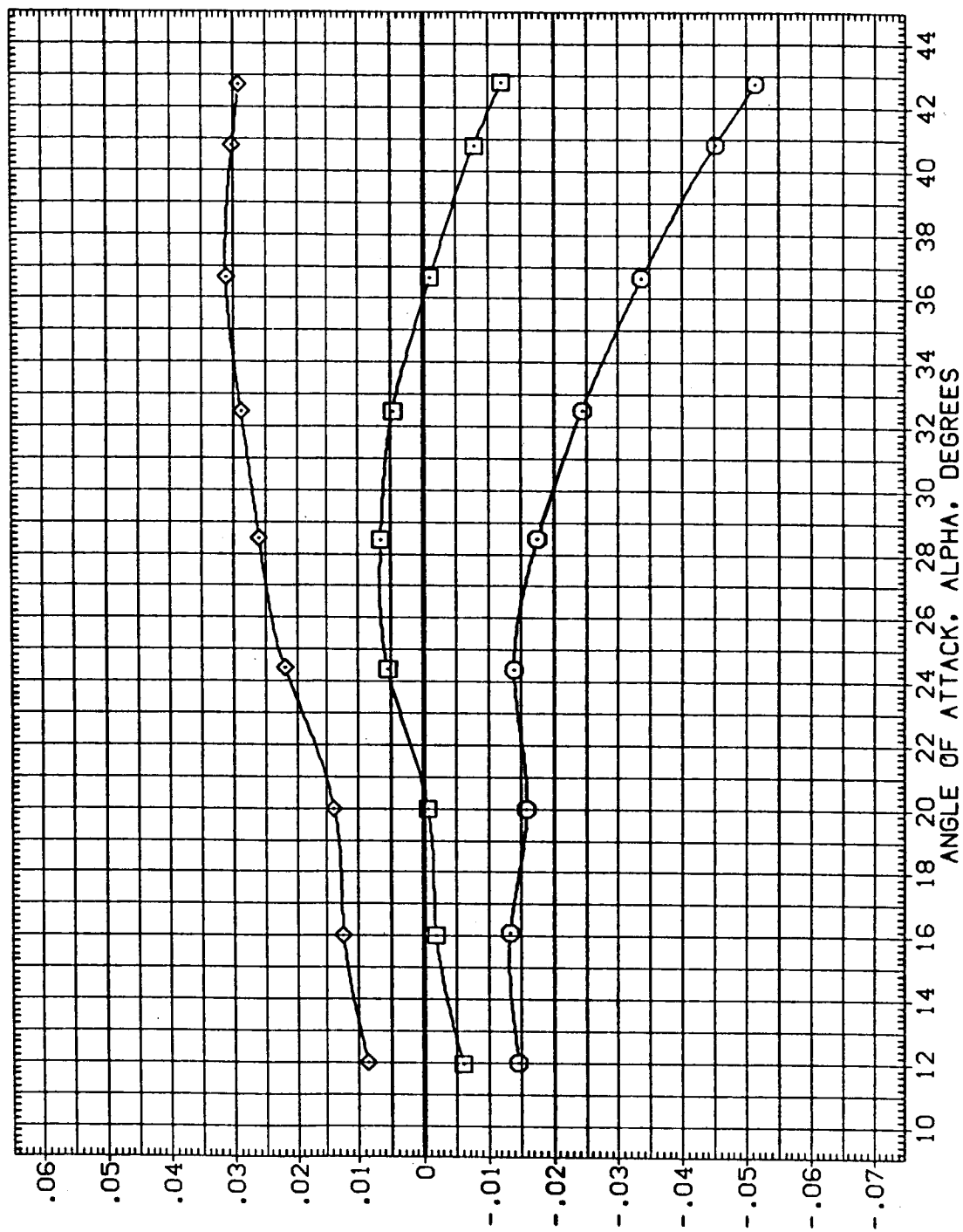


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL      CONFIGURATION DESCRIPTION      BETA      ELEVON      BOFLAP      SPDBRK      REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

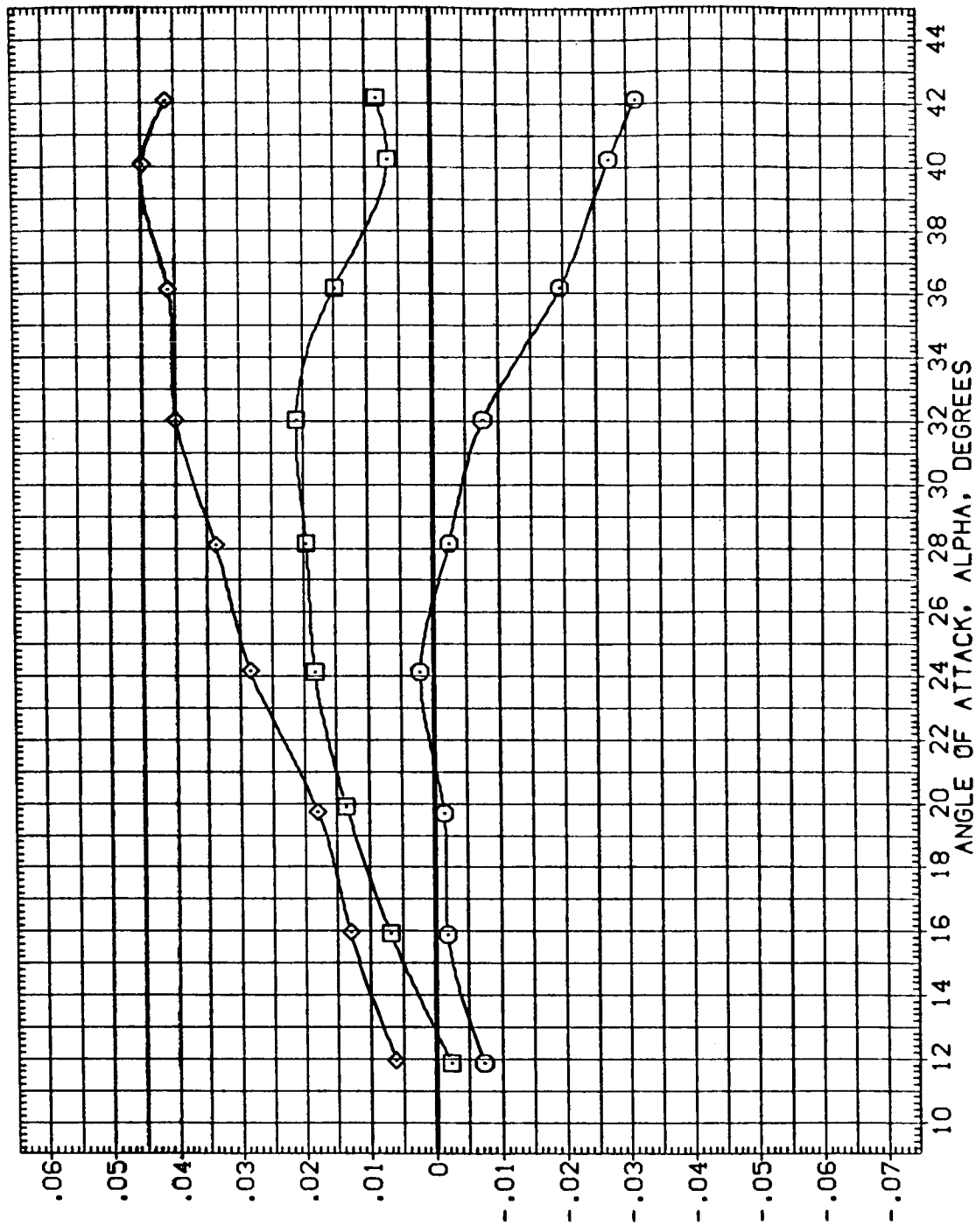


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(B)MACH = 10.27      PAGE 62

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEQ009)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ010)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EEQ011)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XG
						YMRP .0000 IN.YG
						ZMRP .0000 IN.ZG
						SCALE .0150

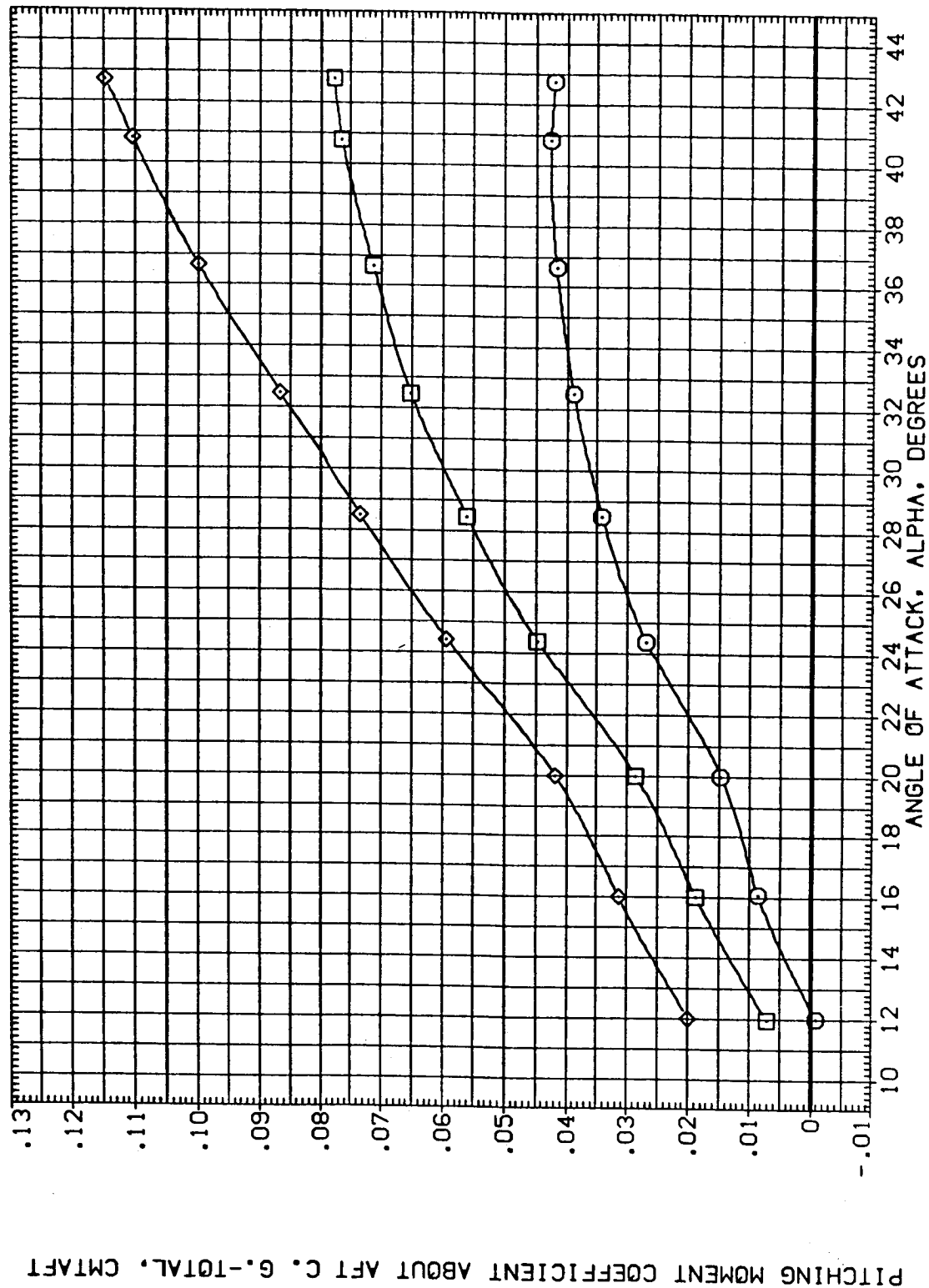


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDF LAP	SPOBRK	REFERENCE INFORMATION
(EE0009)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0011)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XG
						YMRP .0000 IN.YG
						ZMRP 375.0000 IN.ZG
						SCALE .0150

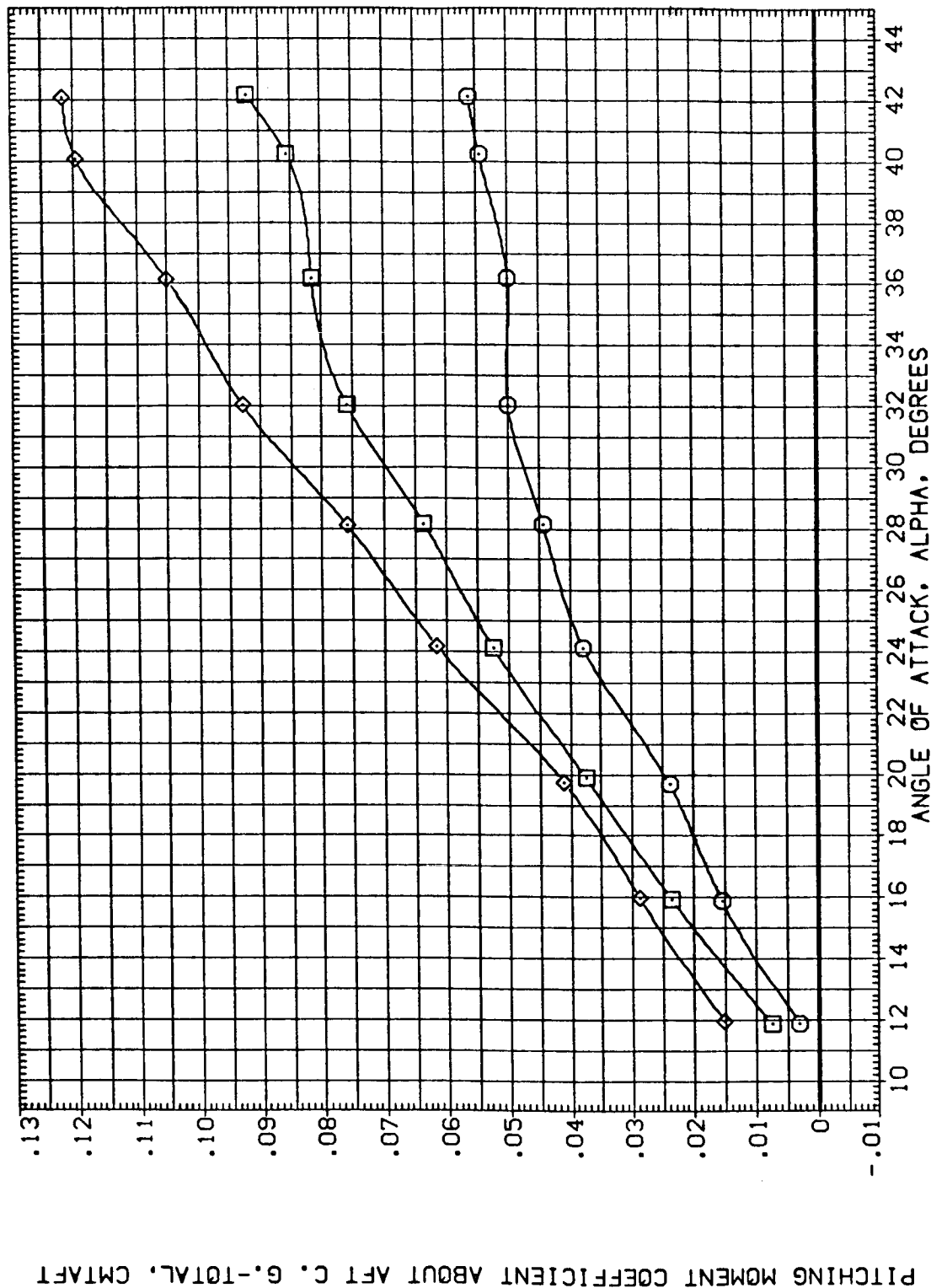


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN. X0
						ZMRP 375.0000 IN. Y0
						SCALE .0150

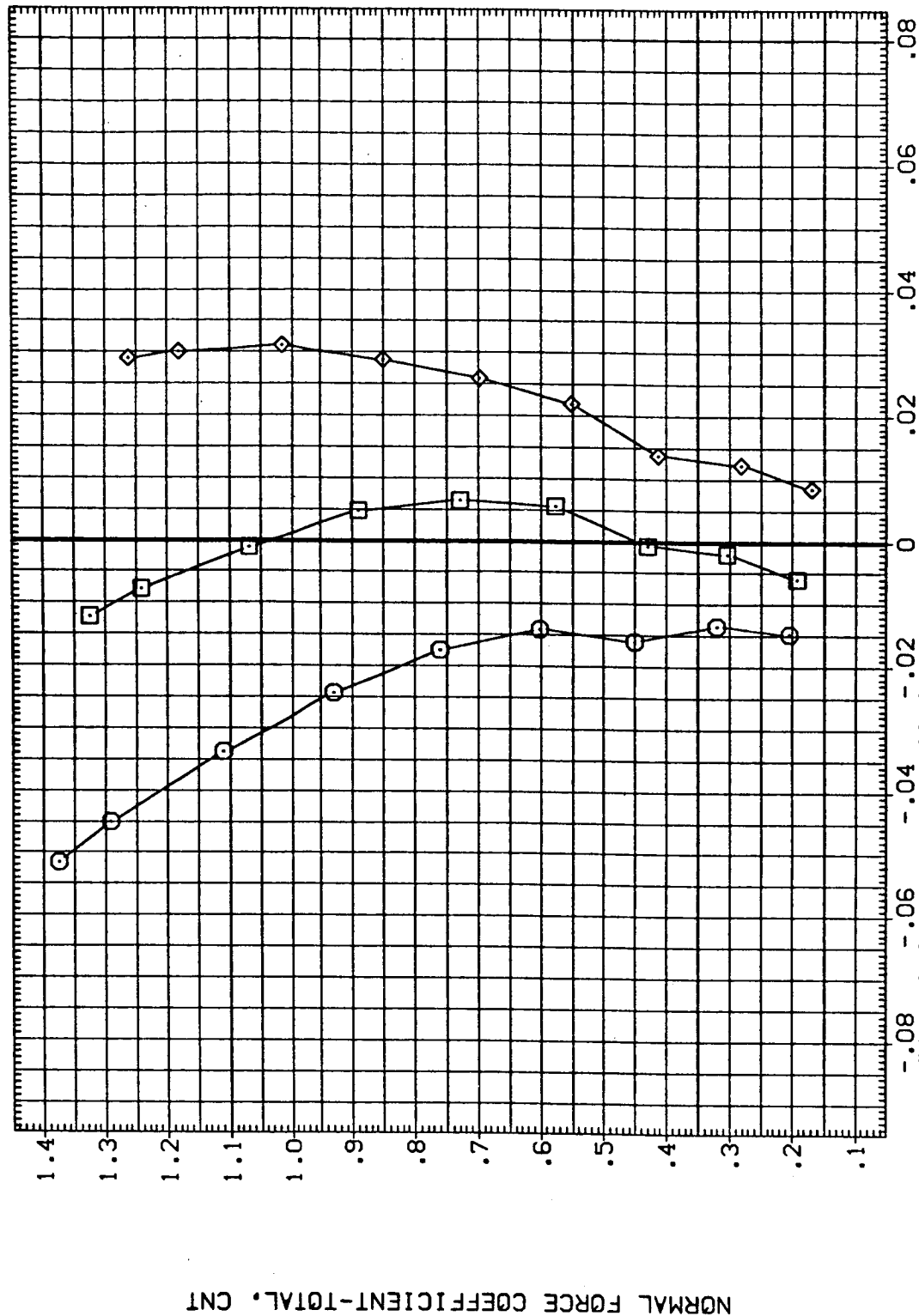


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOELAP	SPDRK	REFERENCE INFORMATION
(EE0009)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0011)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.8000 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

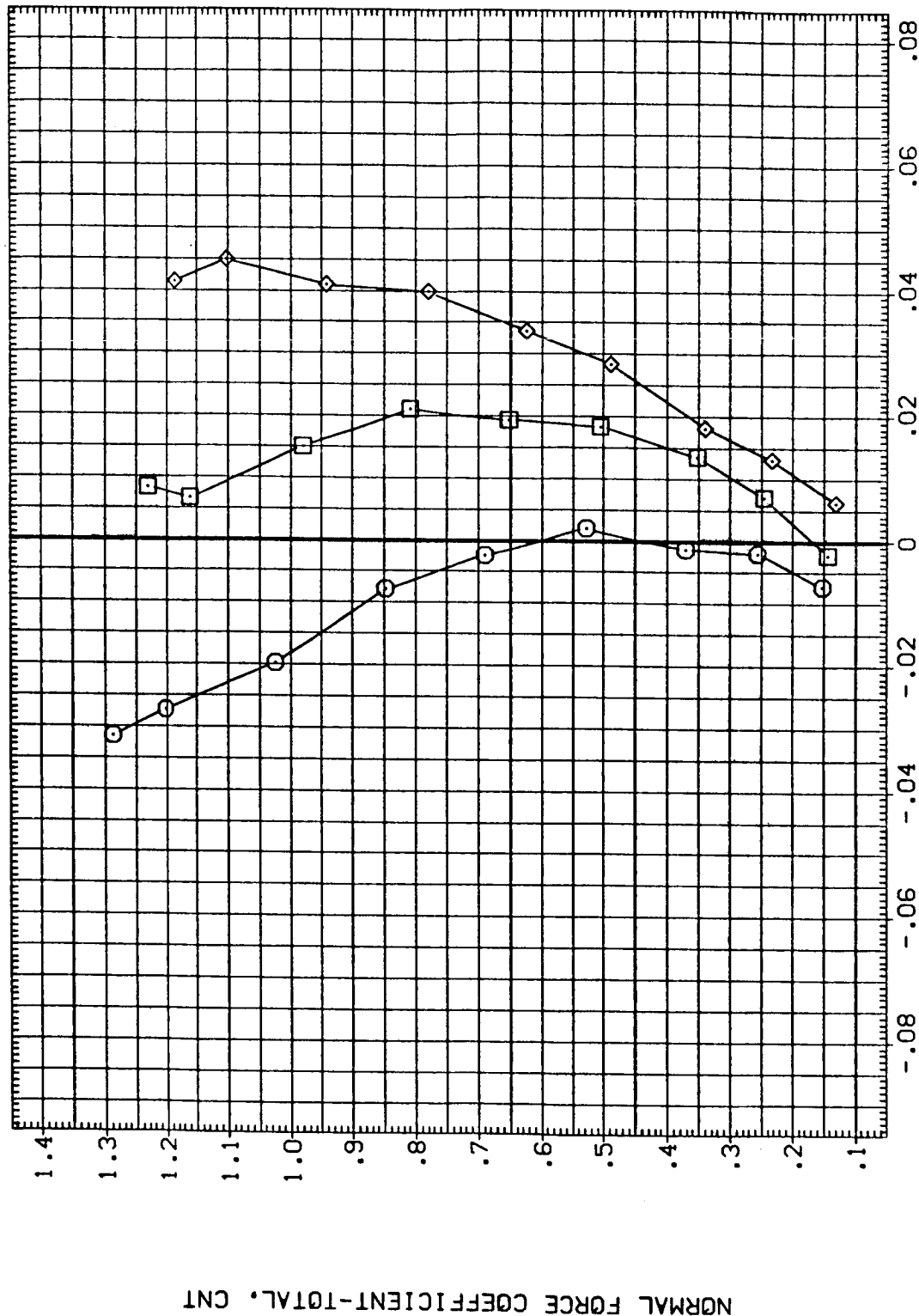


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL  
(EE0009)  
(EE0010)  
(EE0011)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M14-N24)  
AMES 3.5-190 0A98 (011-M14-N24)  
AMES 3.5-190 0A98 (011-M14-N24)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPDBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

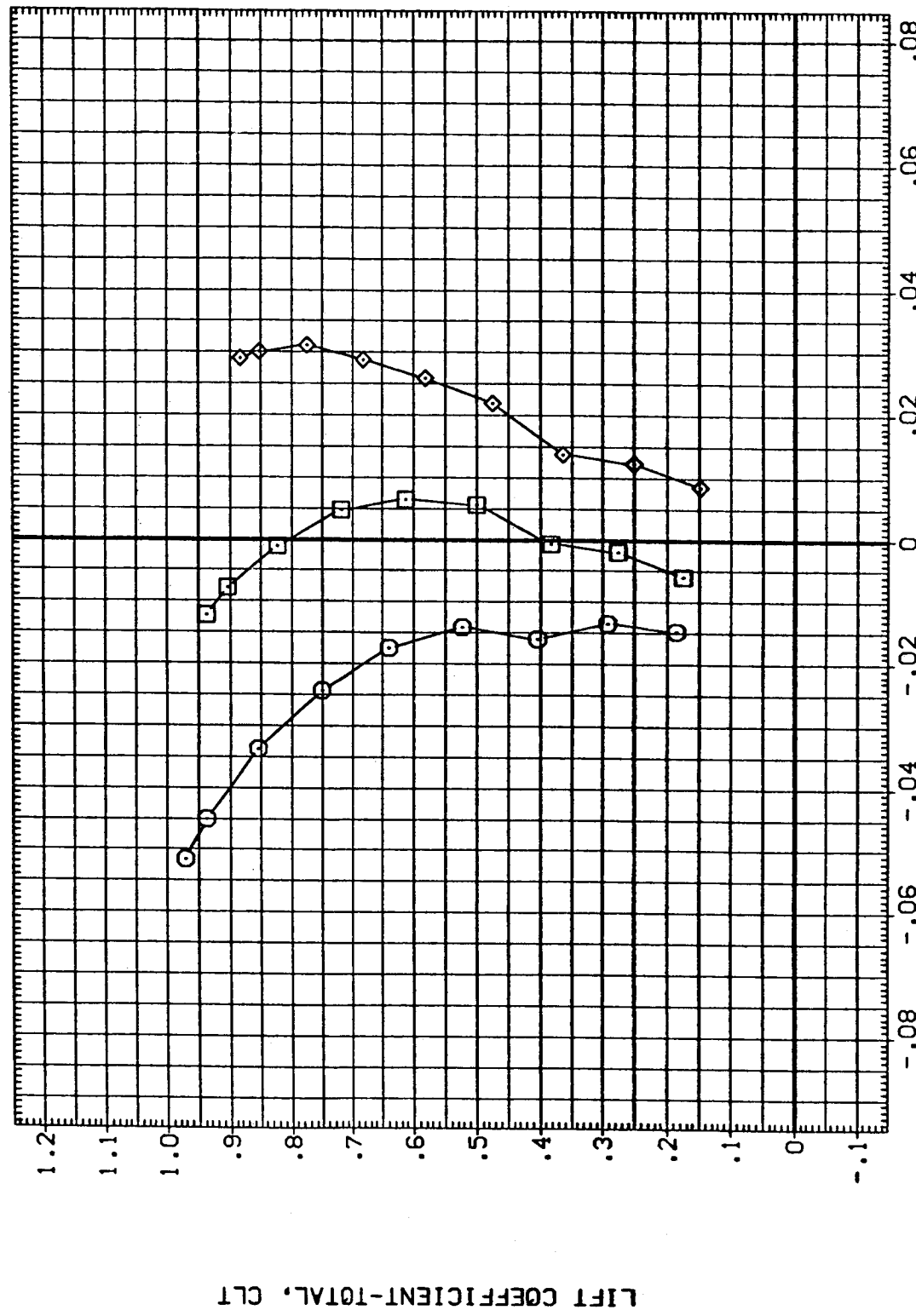


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(M)MACH = 5.25

DATA SET SYMBOL  
(EE0009)  
(EE0010)  
(EE0011)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7-M14-N24)  
AMES 3.5-190 0A98 (011-M7-M14-N24)  
AMES 3.5-190 0A98 (011-M7-M14-N24)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 536.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

LIFT COEFFICIENT-TOTAL, CLT

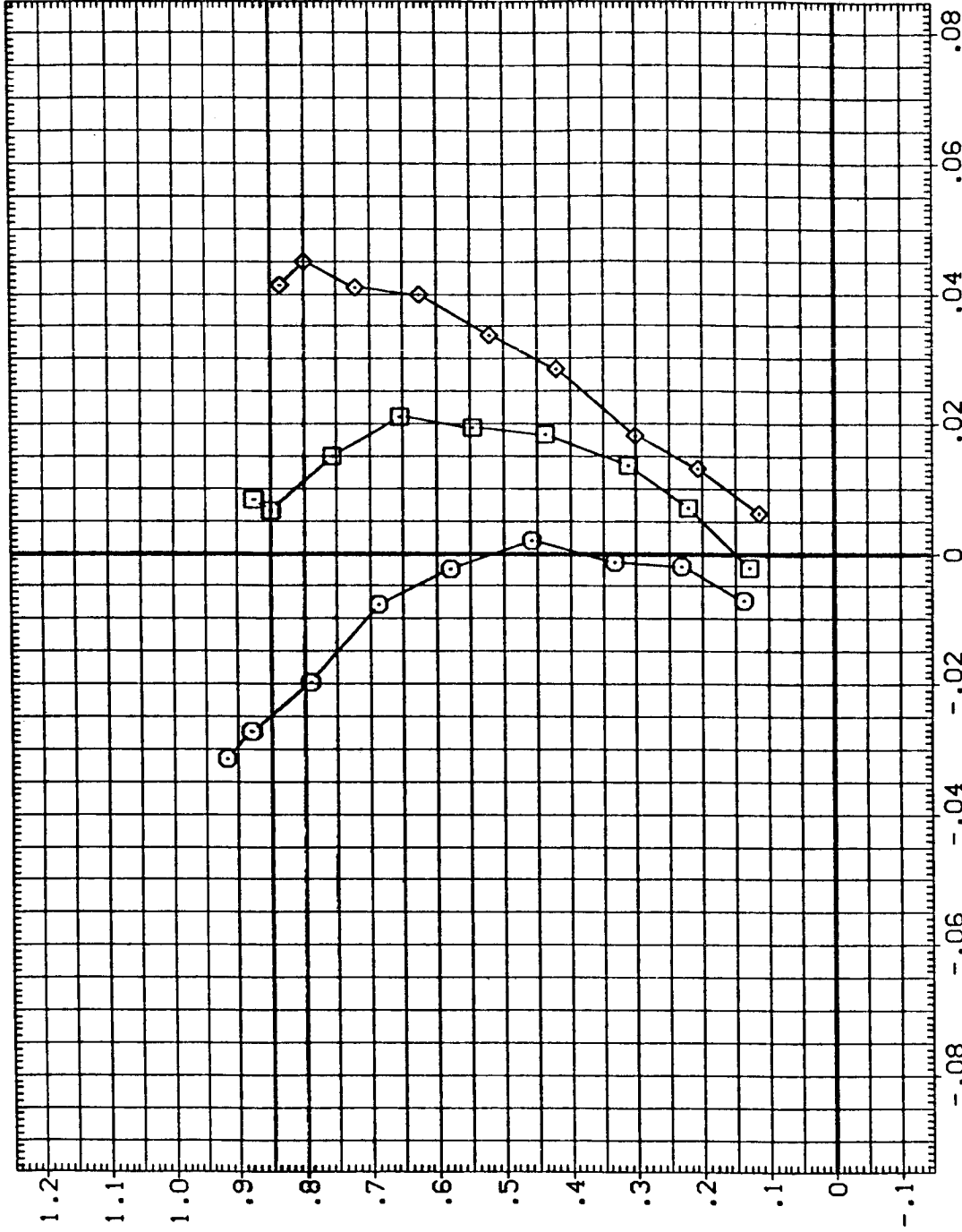


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (EE0009)    AMES 3.5-190 OA98 (011-M7+M14-N24)  
 (EE0010)    AMES 3.5-190 OA98 (011-M7+M14-N24)  
 (EE0011)    AMES 3.5-190 OA98 (011-M7+M14-N24)

BETA    ELEVON    BOFLAP    SPDBRK  
 .000    .000    -11.700    55.000  
 .000    -10.000    -11.700    55.000  
 .000    -40.000    -11.700    55.000

REFERENCE INFORMATION  
 SREF    2690.0000    SQ.FT.  
 LREF    474.8000    IN.  
 BREF    936.6800    IN.  
 XMRP    1076.7000    IN.XG  
 YMRP    .0000    IN.YG  
 ZMRP    375.0000    IN.ZG  
 SCALE    .0150

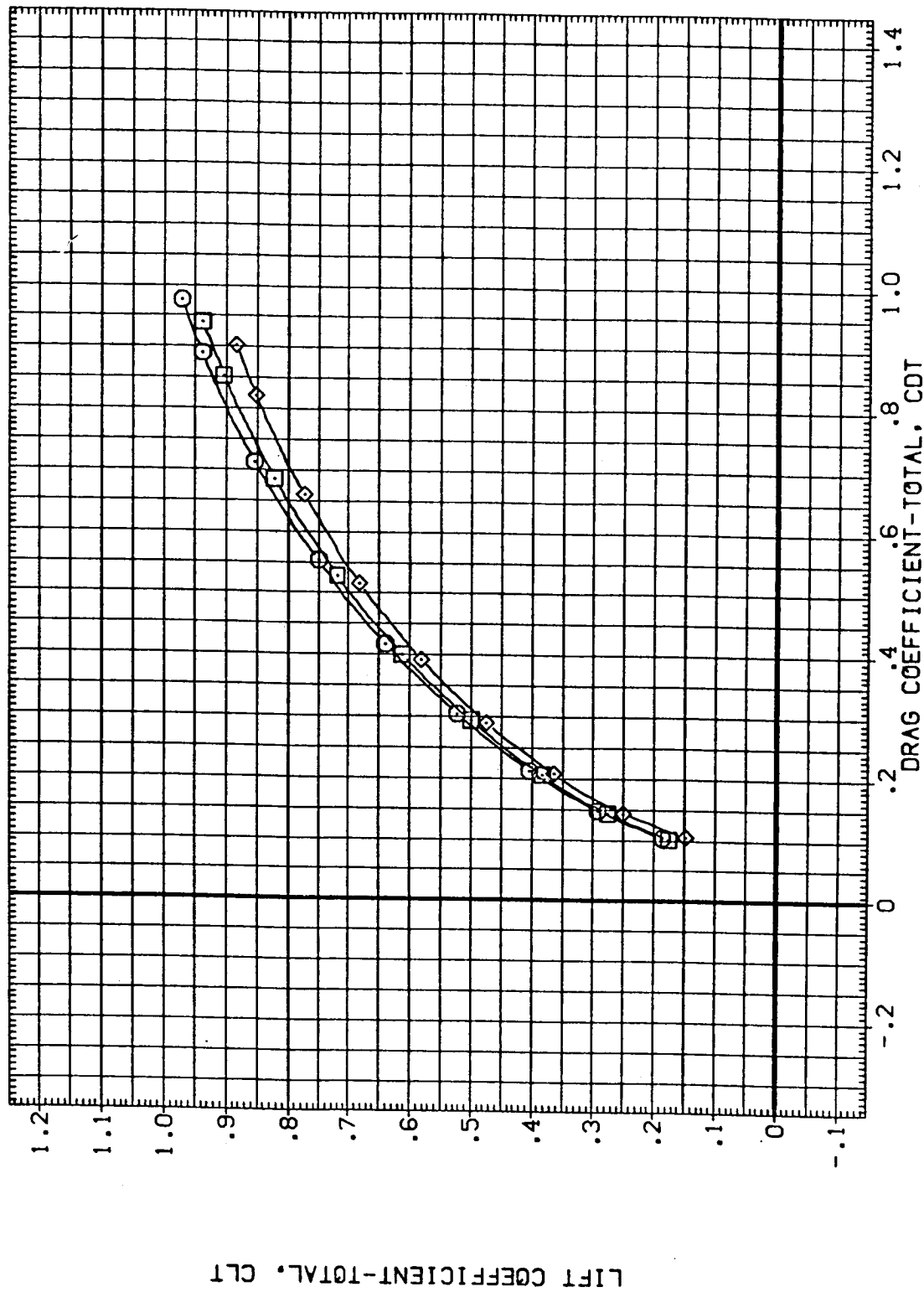


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
(EE0009)  
(EE0010)  
(EE0011)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7-M14-N24)  
AMES 3.5-190 0A98 (011-M7-M14-N24)  
AMES 3.5-190 0A98 (011-M7-M14-N24)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPDRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN. X0  
YMRP .0000 IN. Y0  
ZMRP 375.0000 IN. Z0  
SCALE .0150

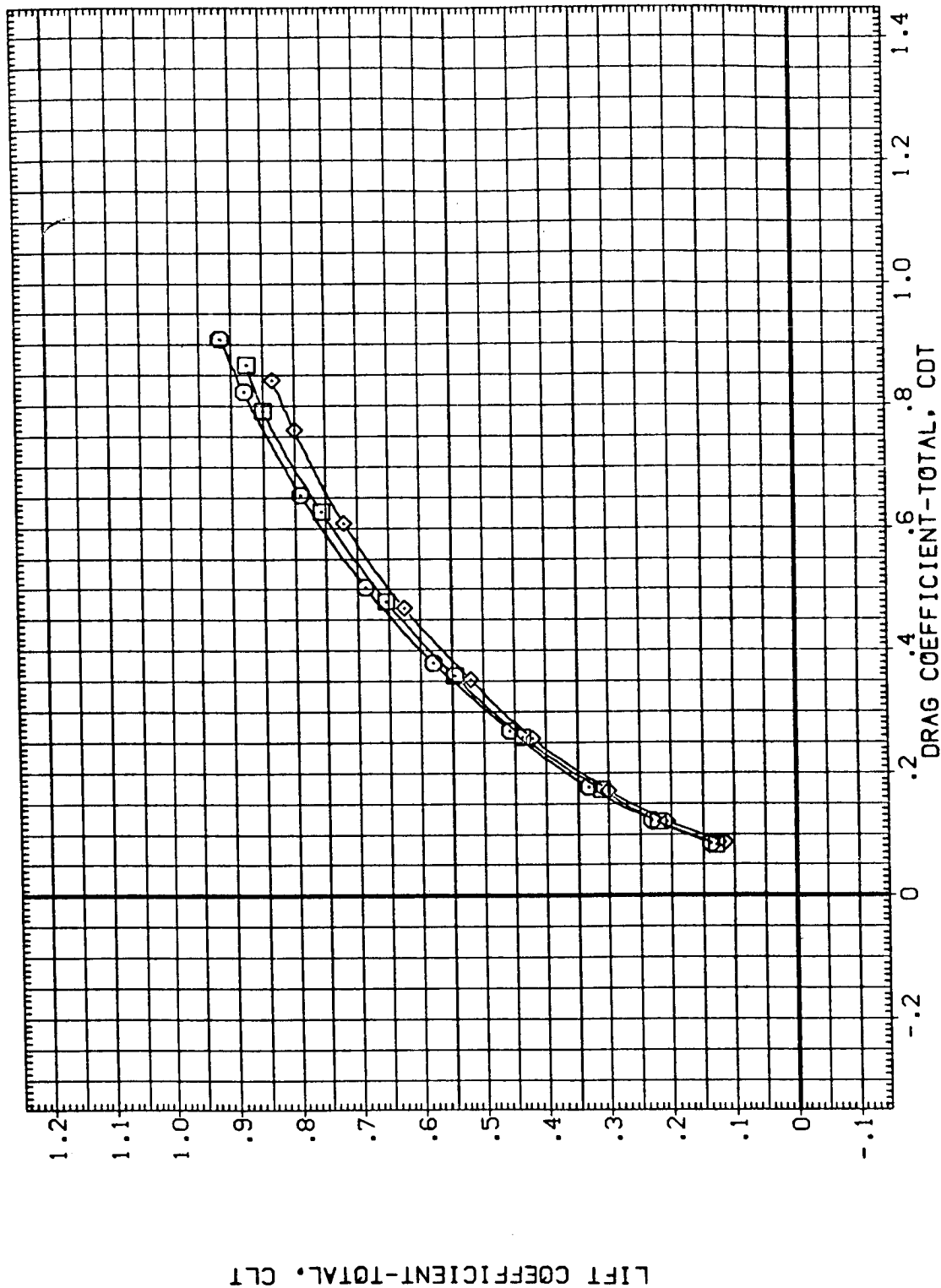


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(E0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(E0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(E0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

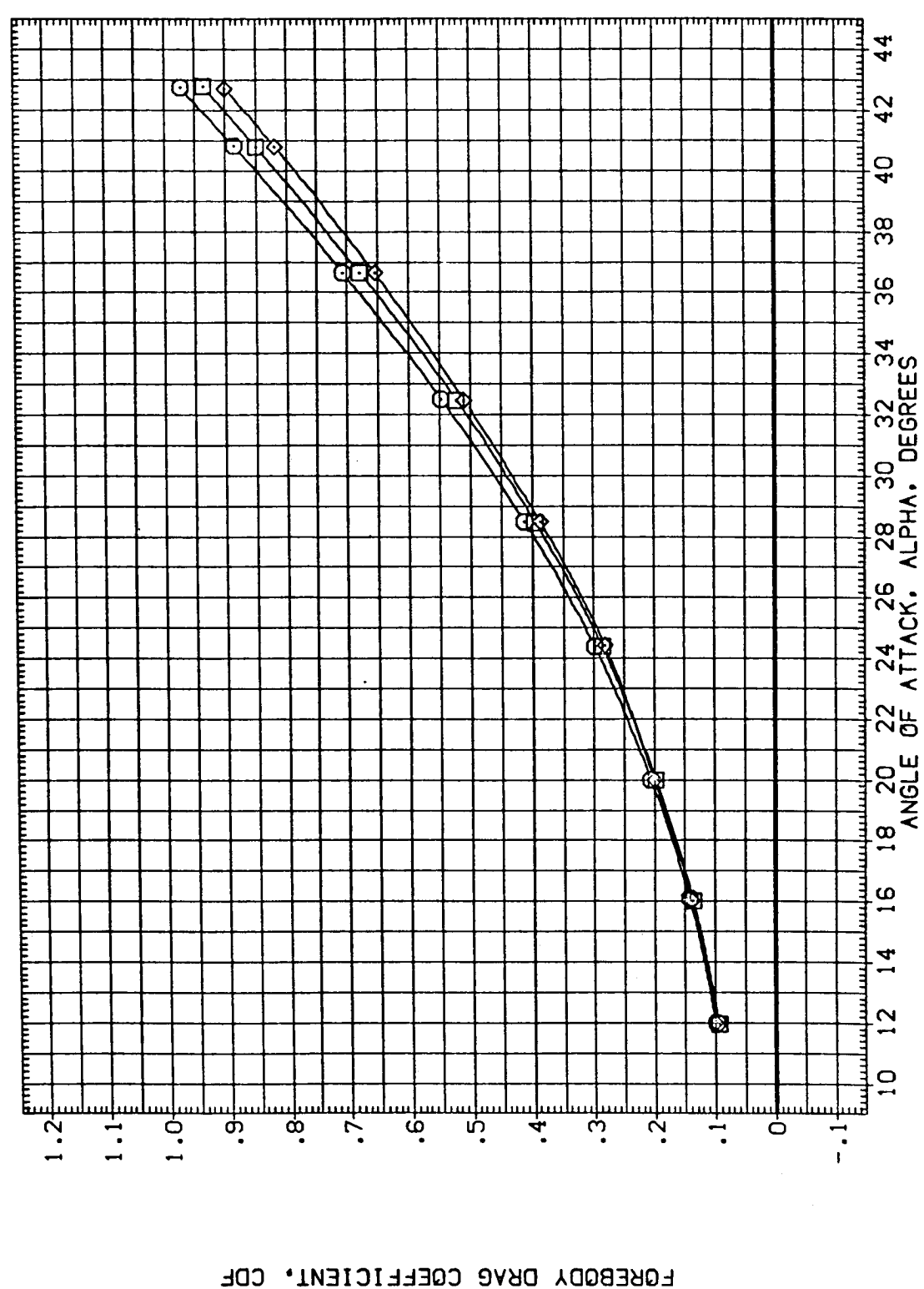


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

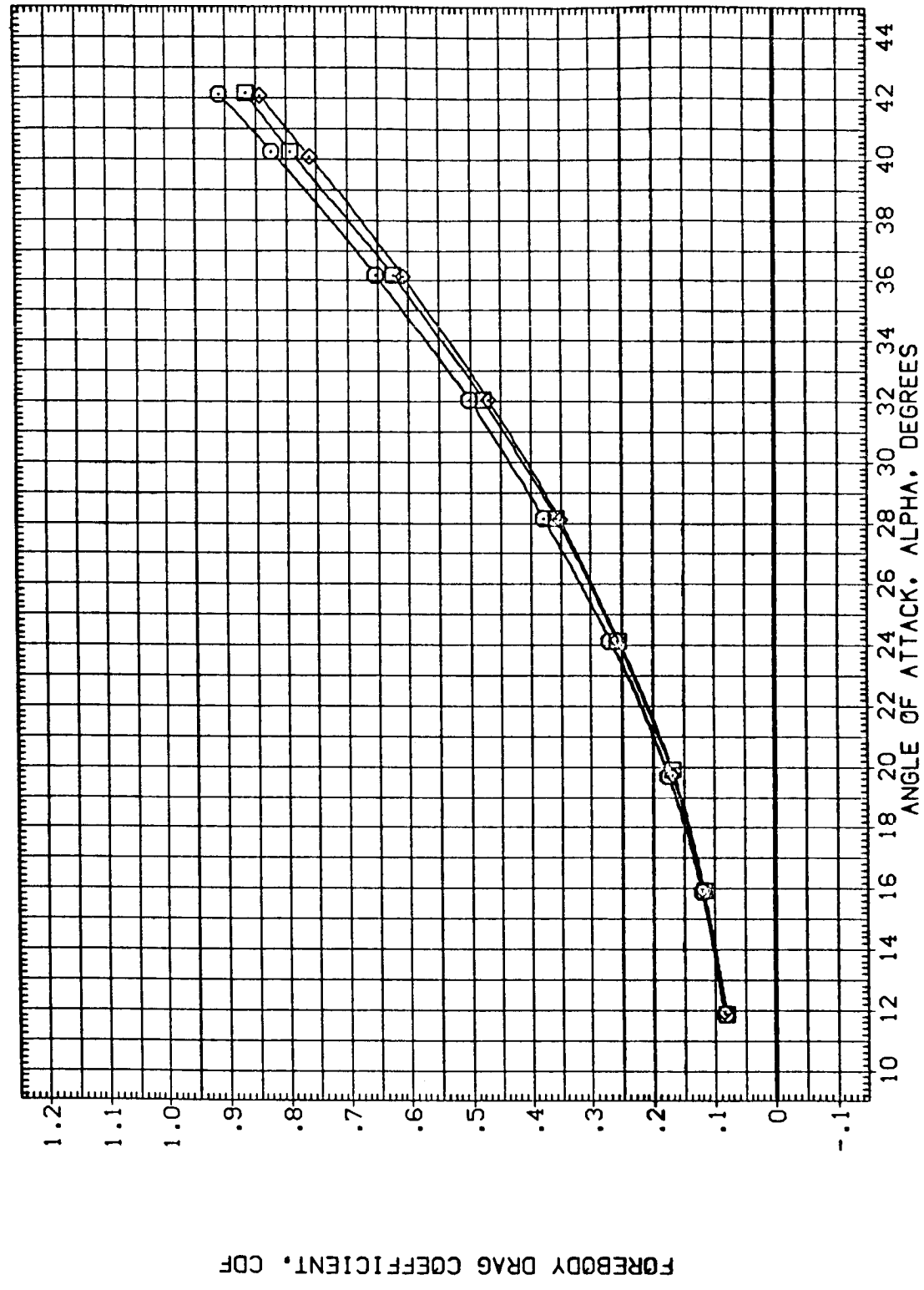


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (B)MACH = 10.27  
 PAGE 72

DATA SET SYMBOL  
(EE0009)  
(EE0010)  
(EE0011)

CONFIGURATION DESCRIPTION

AMES 3.5-190 OA98 (011-M7-M14-N24)  
AMES 3.5-190 OA98 (011-M7-M14-N24)  
AMES 3.5-190 OA98 (011-M7-M14-N24)

BETA

.000  
.000  
.000

ELEVON

.000  
-10.000  
-40.000

BOFLAP

-11.700  
-11.700  
-11.700

SPOBRK

55.000  
55.000  
55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.8800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

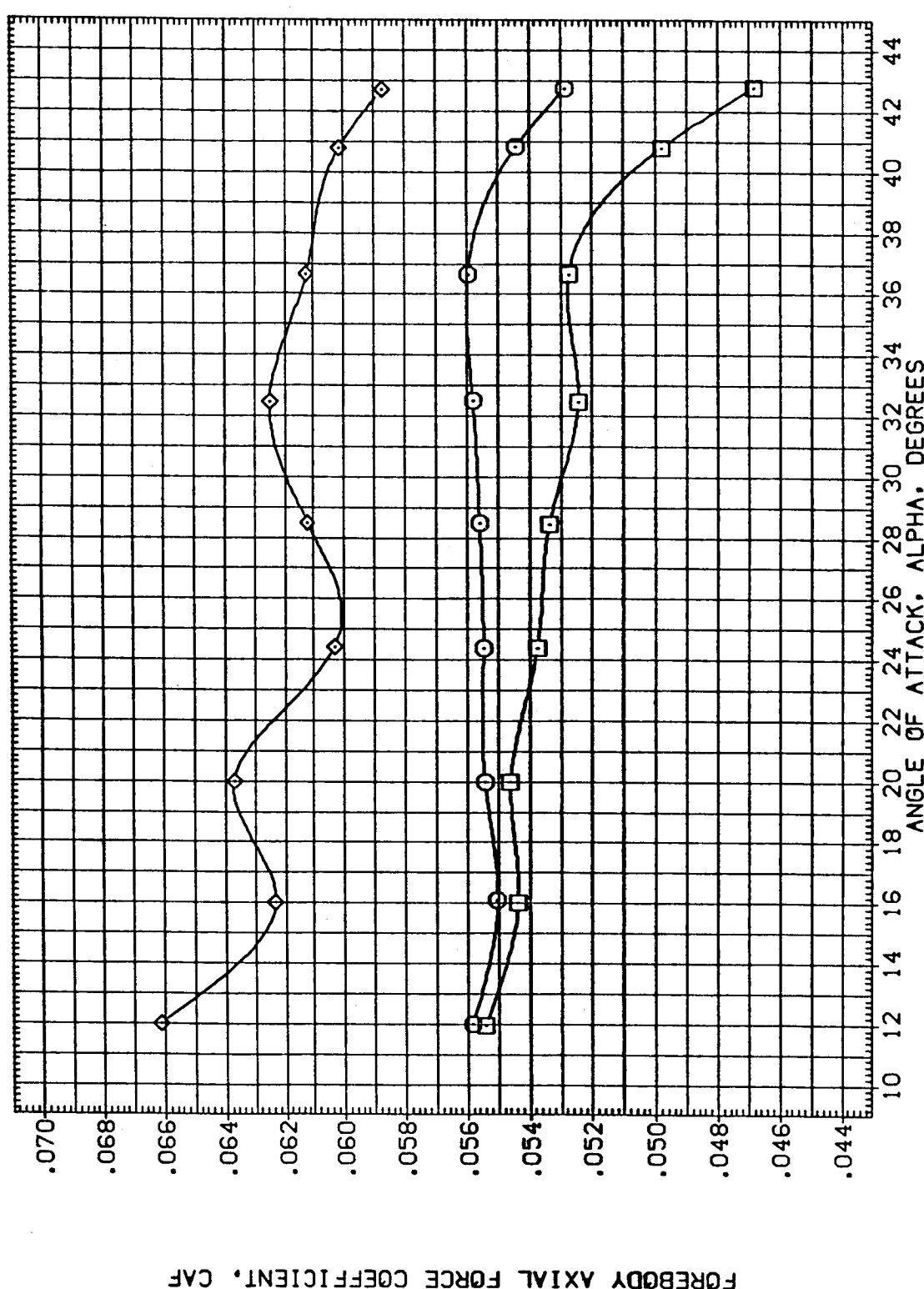


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(EE0009)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0011)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

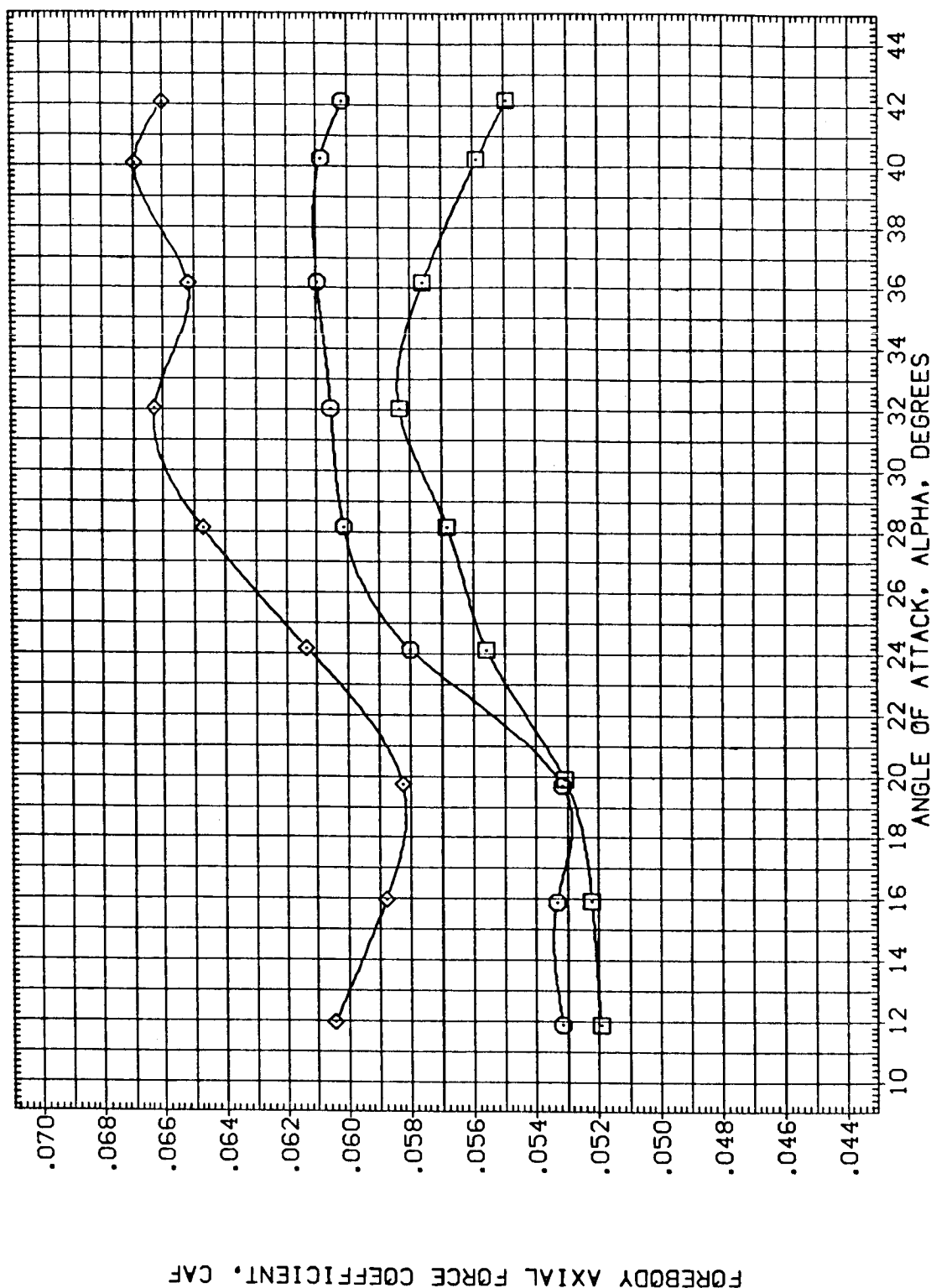


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

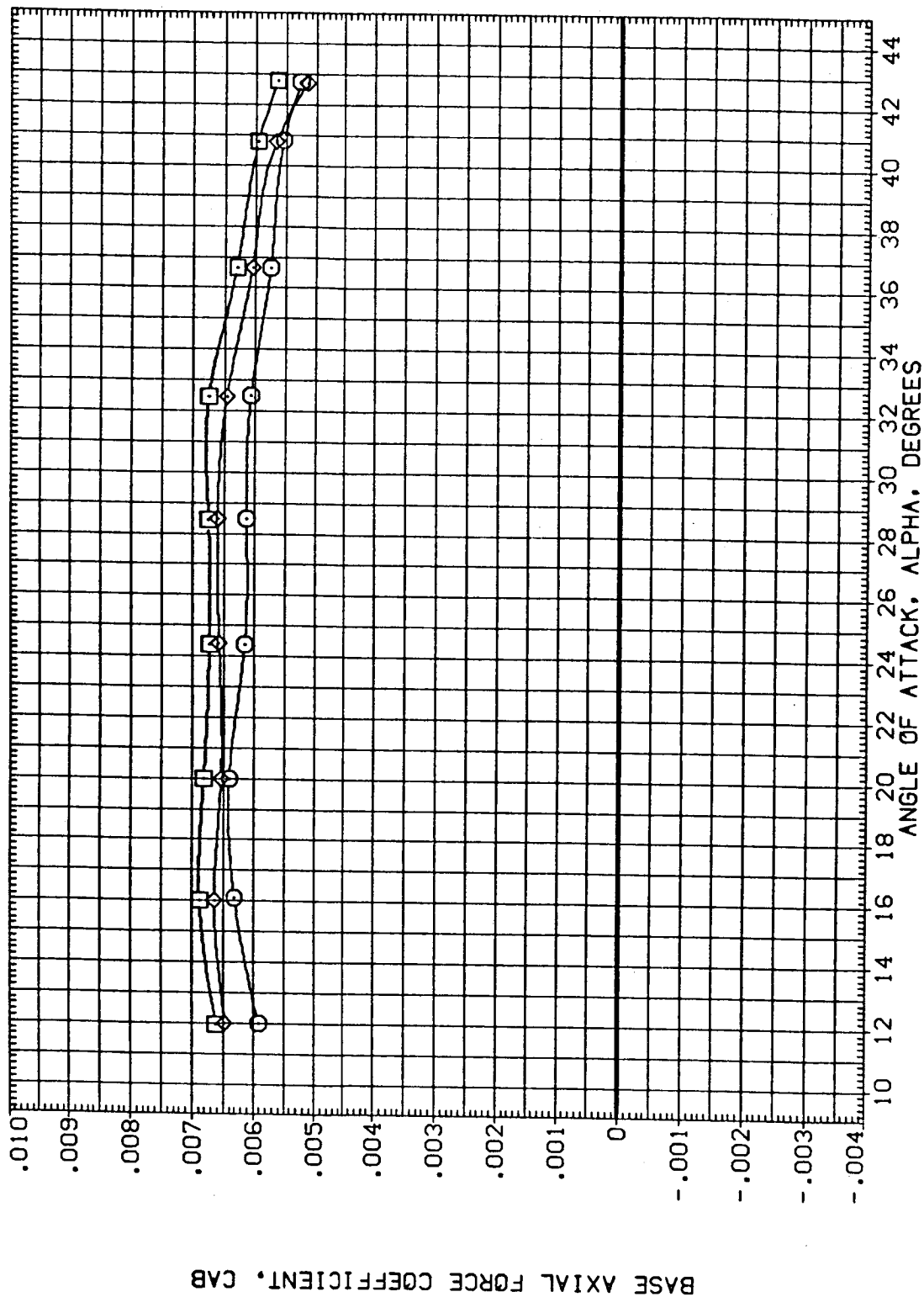


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
(EE0009)  
(EE0010)  
(EE0011)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPDRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SQ.FT.  
IN.  
IN.  
IN.X0  
IN.Y0  
IN.Z0  
SCALE

2690.0000  
474.8000  
936.6800  
1076.7000  
375.0000  
0150

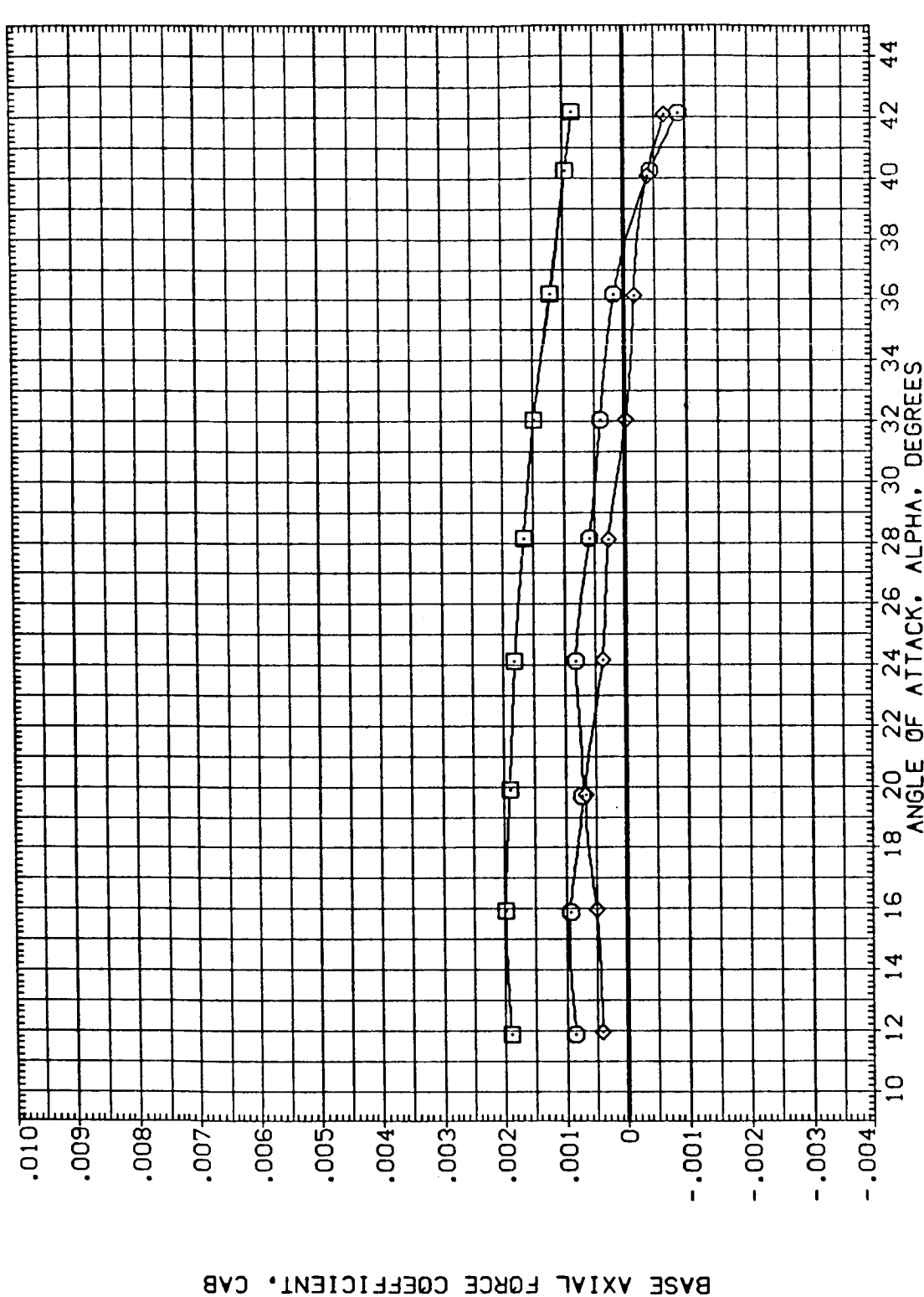


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27





DATA SET SYMBOL  
(BE0009)  
(BE0010)  
(BE0011)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 OASB (011-M7+M14-N24)  
AMES 3.5-190 OASB (011-M7+M14-N24)  
AMES 3.5-190 OASB (011-M7+M14-N24)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPDRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.XB  
YMRP .0000 IN.YB  
ZMRP 375.0000 IN.ZB  
SCALE .0150

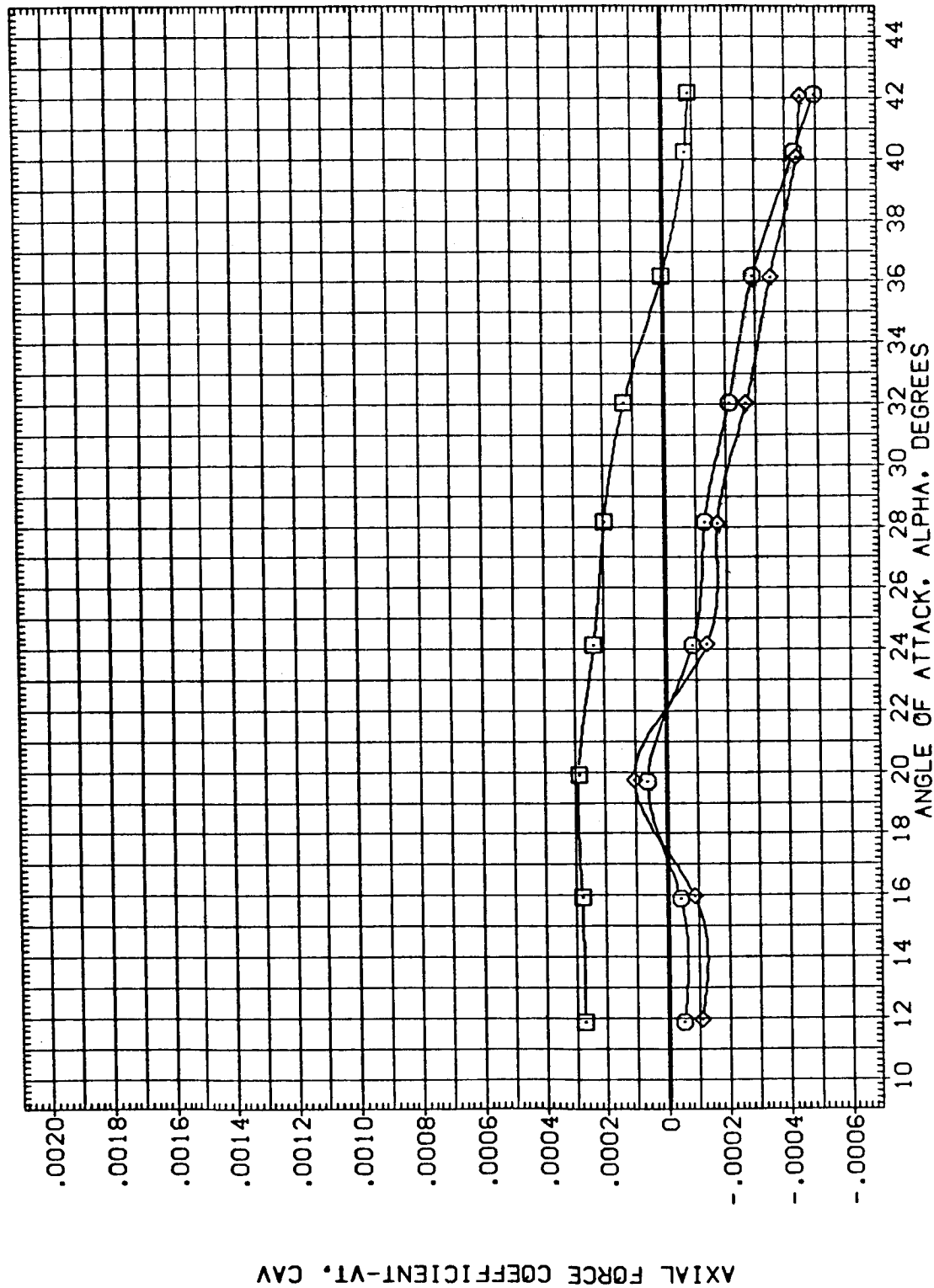


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL      CONFIGURATION DESCRIPTION  
 (BE0009)      AMES 3.5-190 0A98 (011-M7-M14-N24)  
 (BE0010)      AMES 3.5-190 0A98 (011-M7-M14-N24)  
 (BE0011)      AMES 3.5-190 0A98 (011-M7-M14-N24)

BETA      ELEVON      BOFLAP      SPOBRK

REFERENCE INFORMATION  
 SREF      2690.0000      SQ.FT.  
 LREF      474.8000      IN.  
 BREF      936.6800      IN.  
 XMRP      1076.7000      IN.X0  
 YMRP      .0000      IN.Y0  
 ZMRP      375.0000      IN.Z0  
 SCALE      .0150

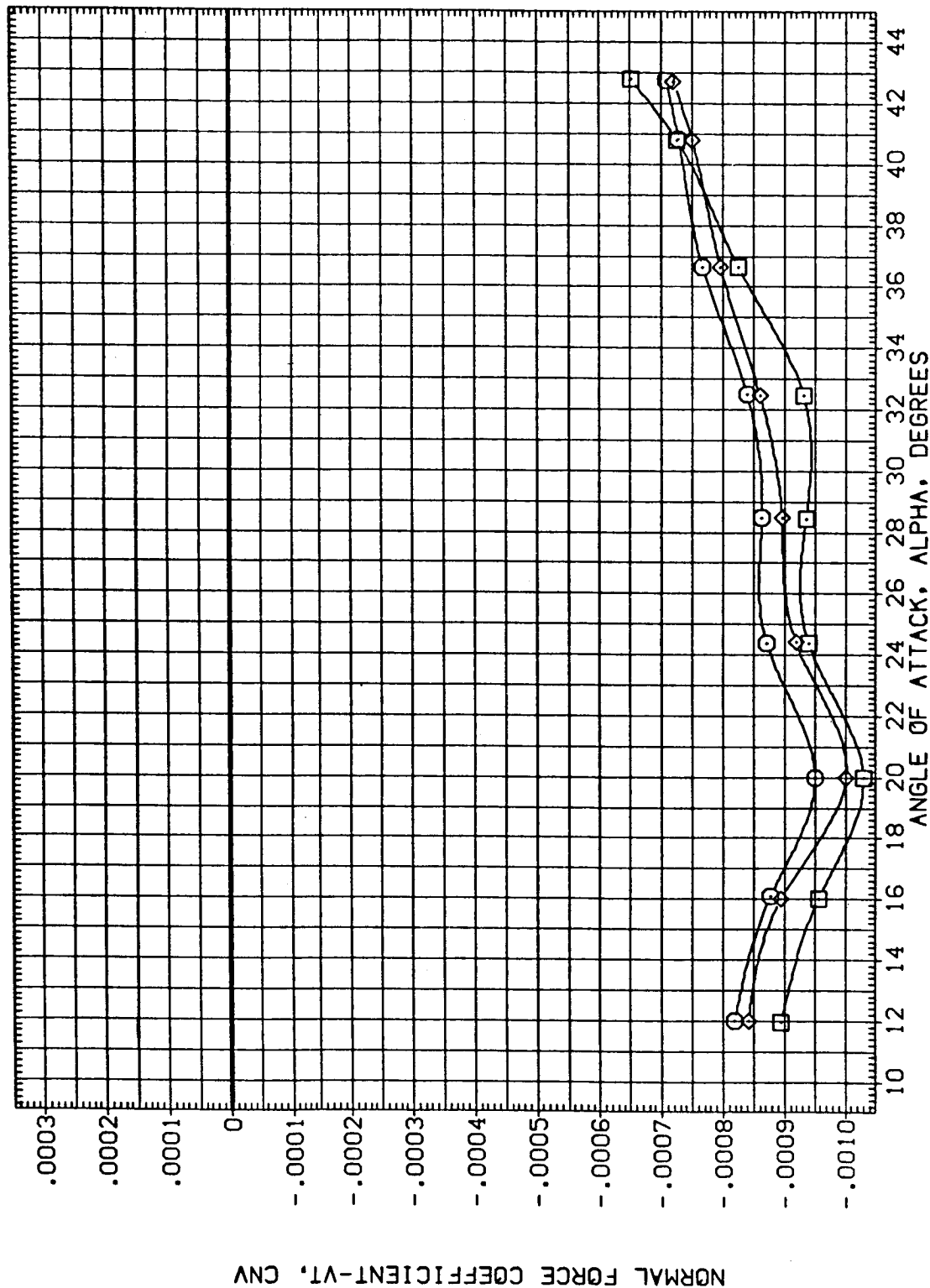


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BE0009) AMES 3.5-190 0A98 (011-M7+M14-N24)  
 (BE0010) AMES 3.5-190 0A98 (011-M7+M14-N24)  
 (BE0011) AMES 3.5-190 0A98 (011-M7+M14-N24)

BETA ELEVON BOFLAP SPOBRK  
 .000 .000 -11.700 55.000  
 .000 -10.000 -11.700 55.000  
 .000 -40.000 -11.700 55.000  
 XMRP YMRP ZMRP SCALE  
 .0000 .0000 .0000 .0150  
 375.0000  
 REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0

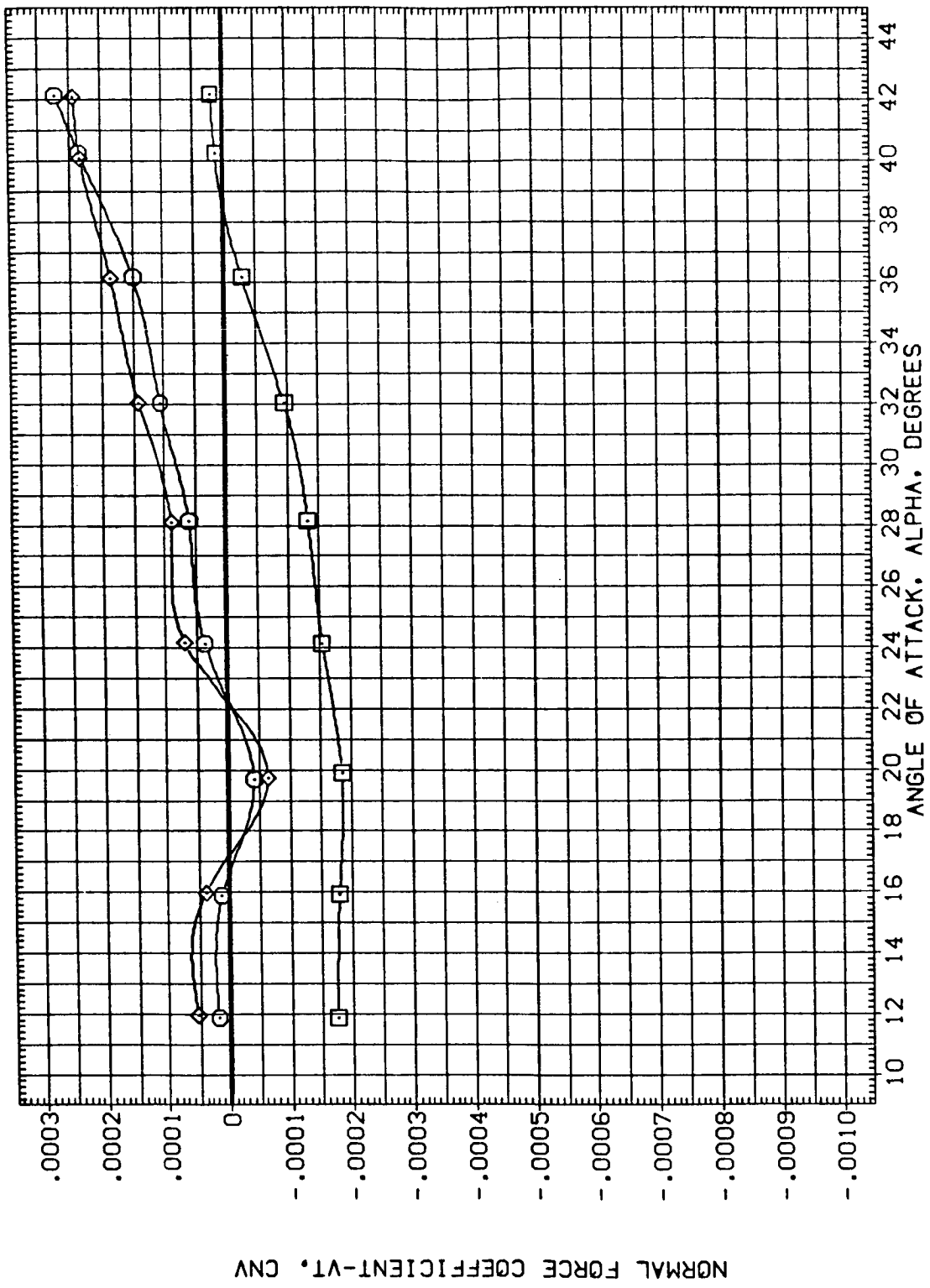


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0009)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0010)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BE0011)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

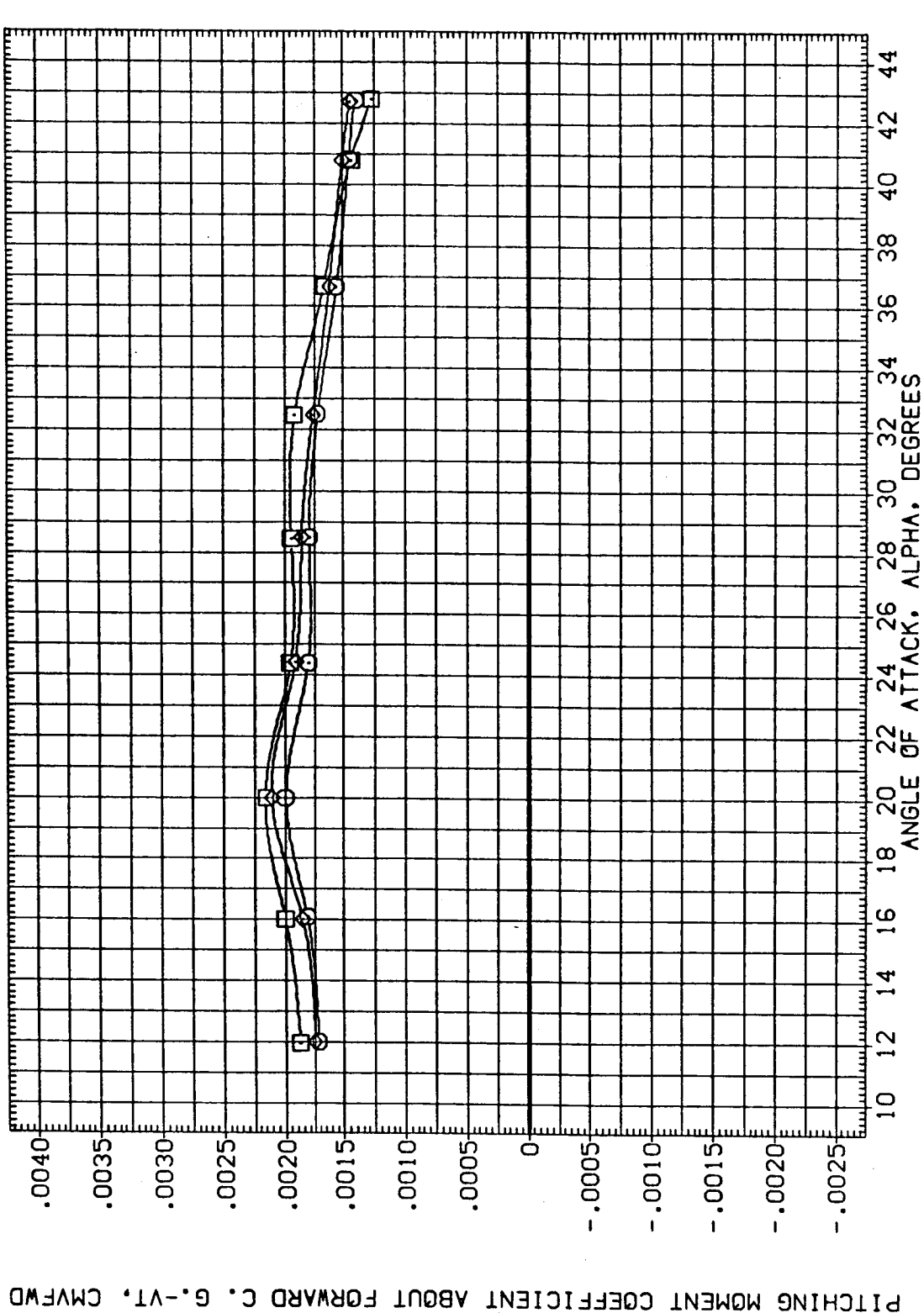


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (BE0009) AMES 3.5-190 0A98 (011-M7-M14-N24)  
 (BE0010) AMES 3.5-190 0A98 (011-M7-M14-N24)  
 (BE0011) AMES 3.5-190 0A98 (011-M7-M14-N24)

BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION  
 .000 .000 -11.700 55.000 SREF 2650.0000 SQ.FT.  
 .000 -10.000 -11.700 55.000 LREF 474.8000 IN.  
 .000 -40.000 -11.700 55.000 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

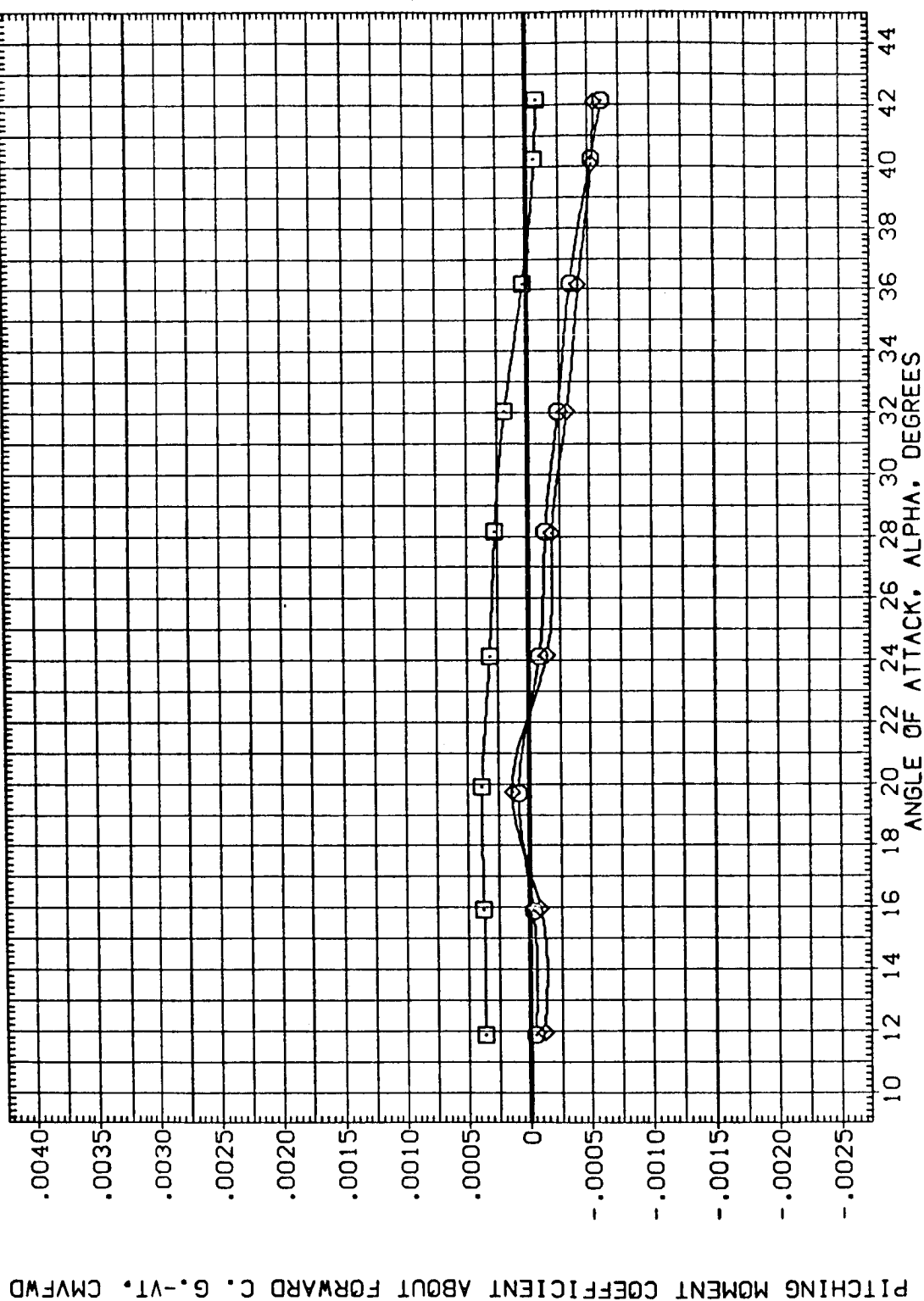


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0009)	AMES 3.5-190 0A98 (011-M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0010)	AMES 3.5-190 0A98 (011-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BE0011)	AMES 3.5-190 0A98 (011-M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

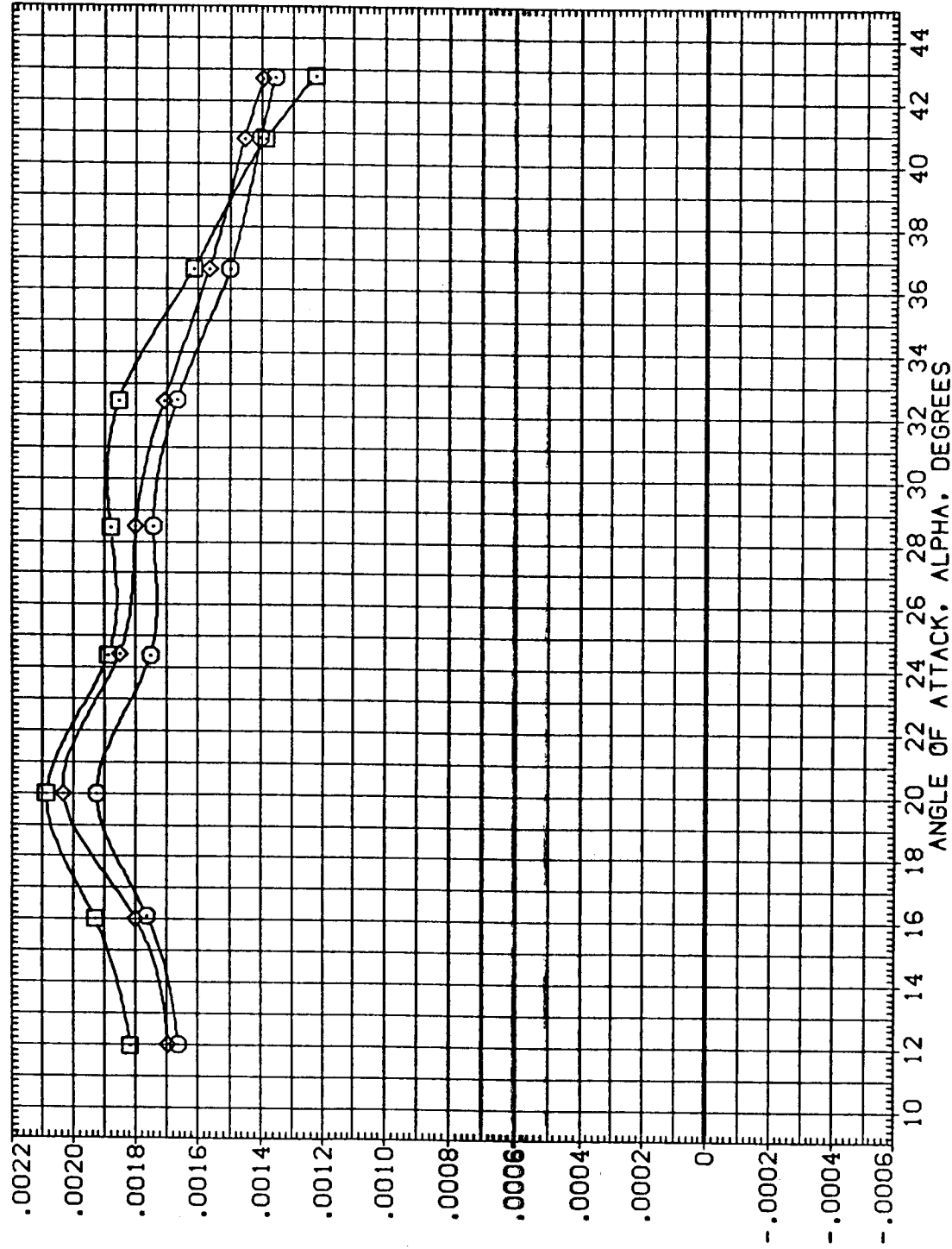


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BE0009)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0010)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BE0011)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

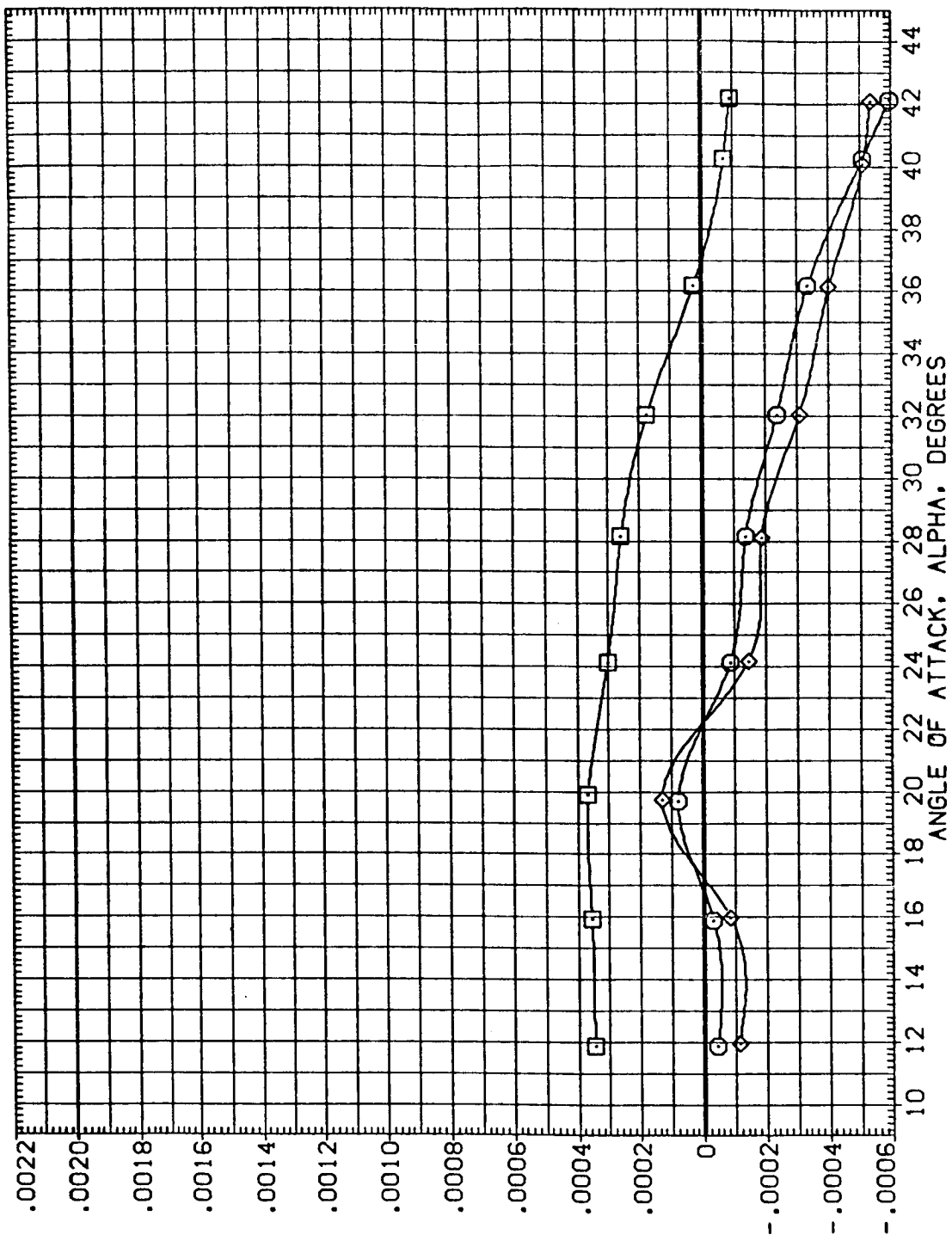


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

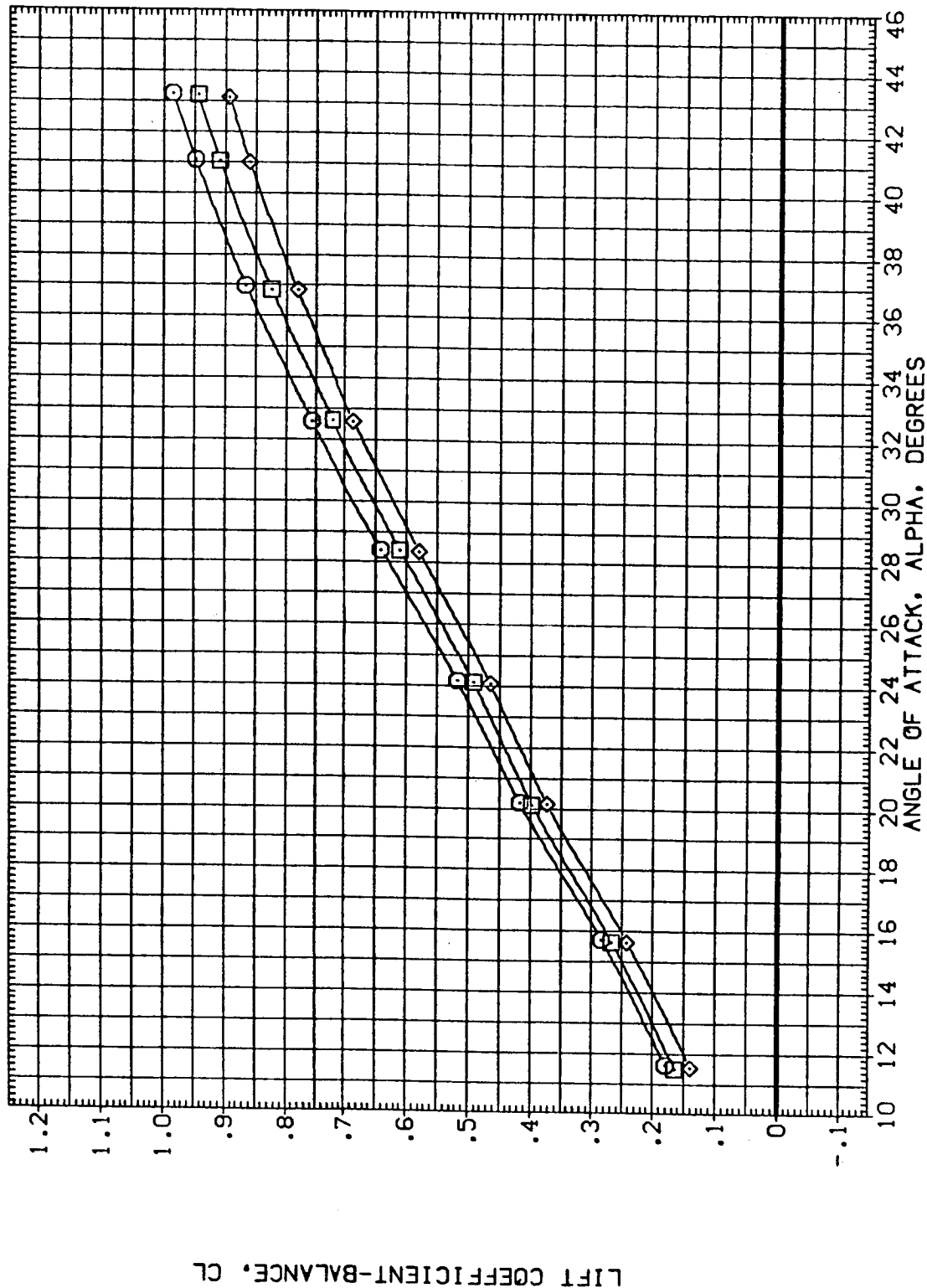


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
(CE0017)  
(CE0018)  
(CE0019)

CONFIGURATION DESCRIPTION  
AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)  
AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)  
AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION

SREF 2690.0000 SO.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.XD  
YMRP .0000 IN.YD  
ZMRP 375.0000 IN.ZD  
SCALE .0150

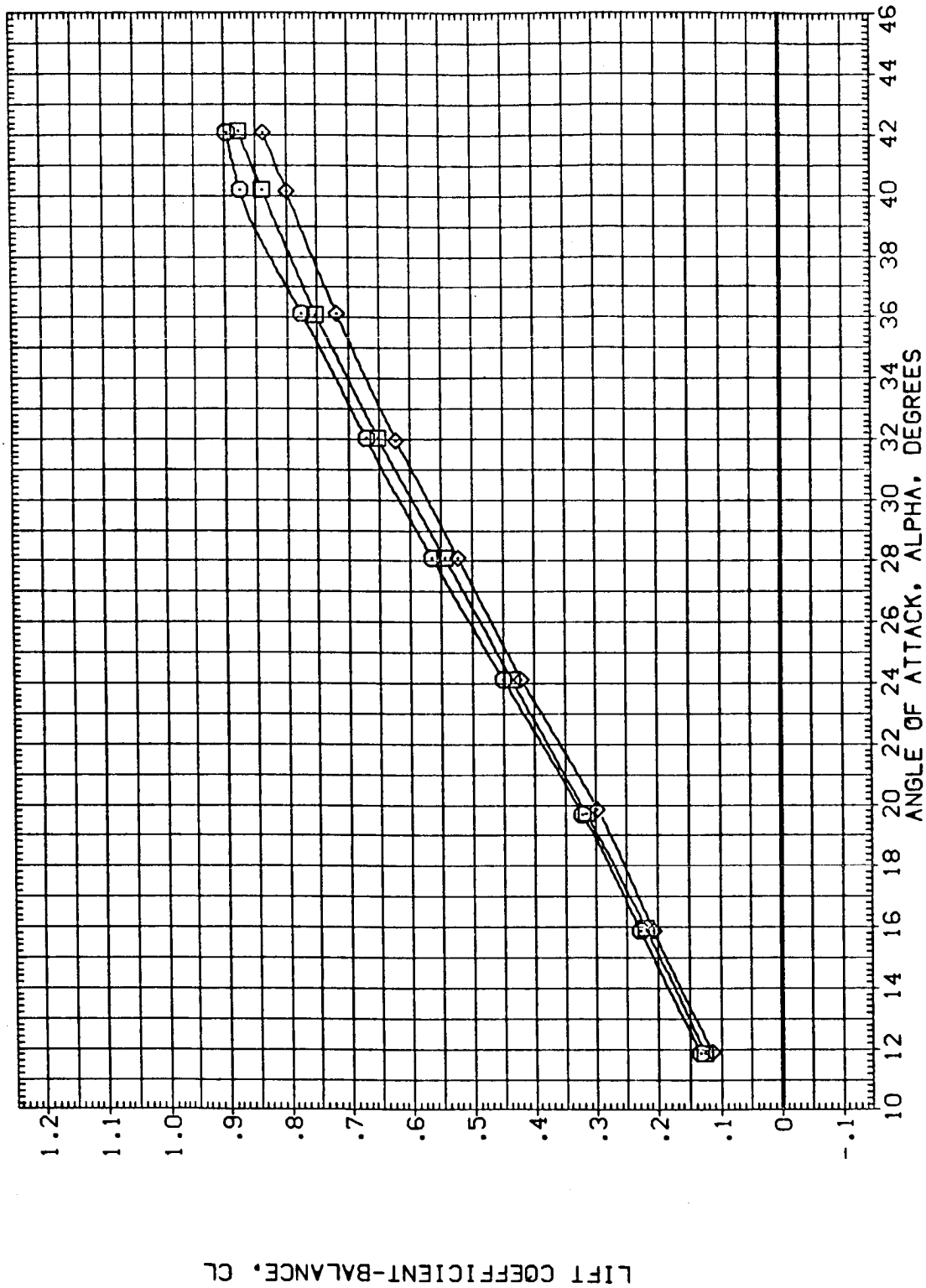


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE 375.0000 IN.Z0
						.0150

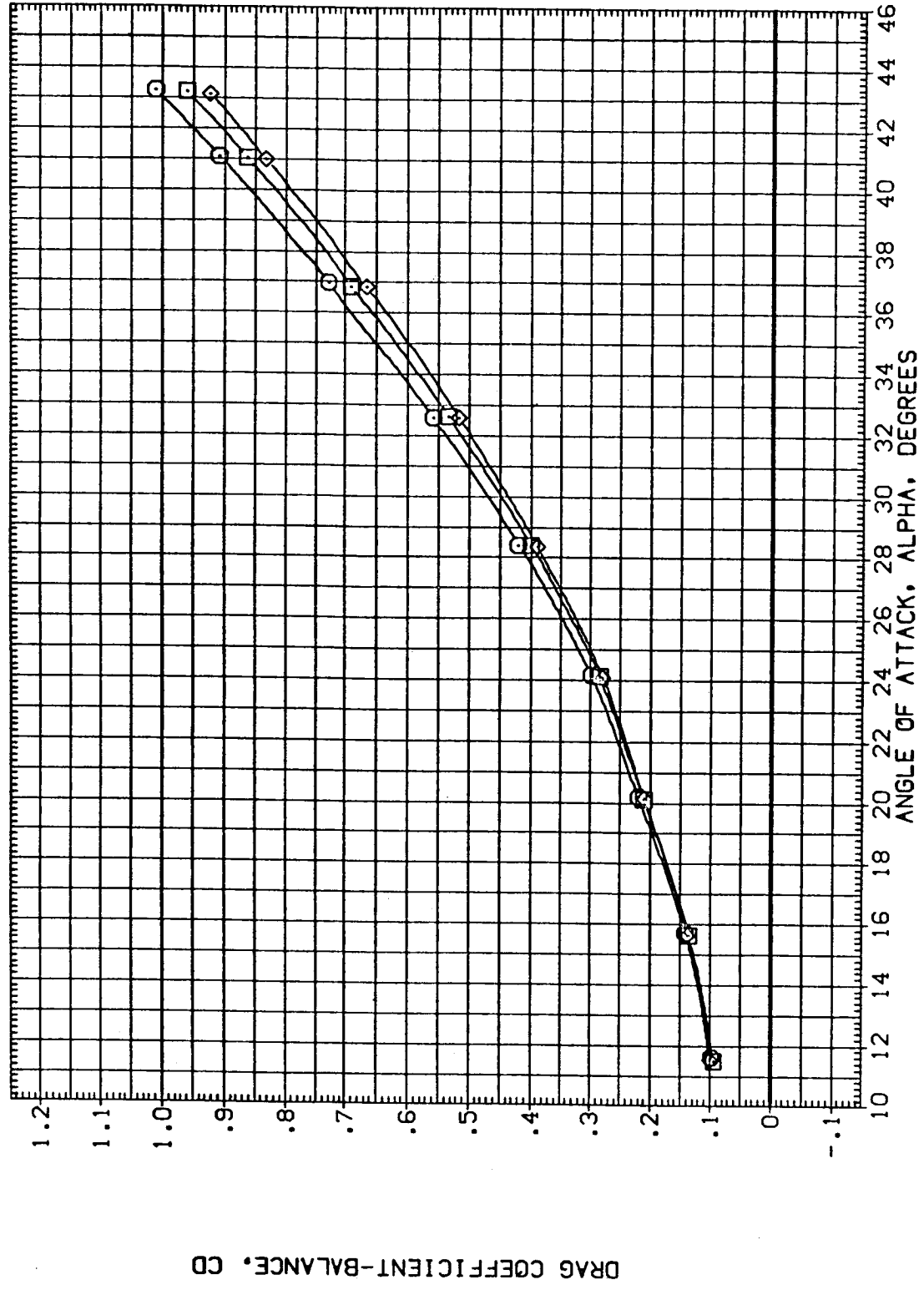


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 5.25

DATA SET SYMBOL  
 (CE0017)  
 (CE0018)  
 (CE0019)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)  
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)  
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA  
 .000  
 .000  
 .000

ELEVON  
 .000  
 -10.000  
 -40.000

BOFLAP  
 -11.700  
 -11.700  
 -11.700

SPDRK  
 55.000  
 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X9  
 YMRP .0000 IN.Y9  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

DRAG COEFFICIENT-BALANCE, CD

ANGLE OF ATTACK, ALPHA, DEGREES

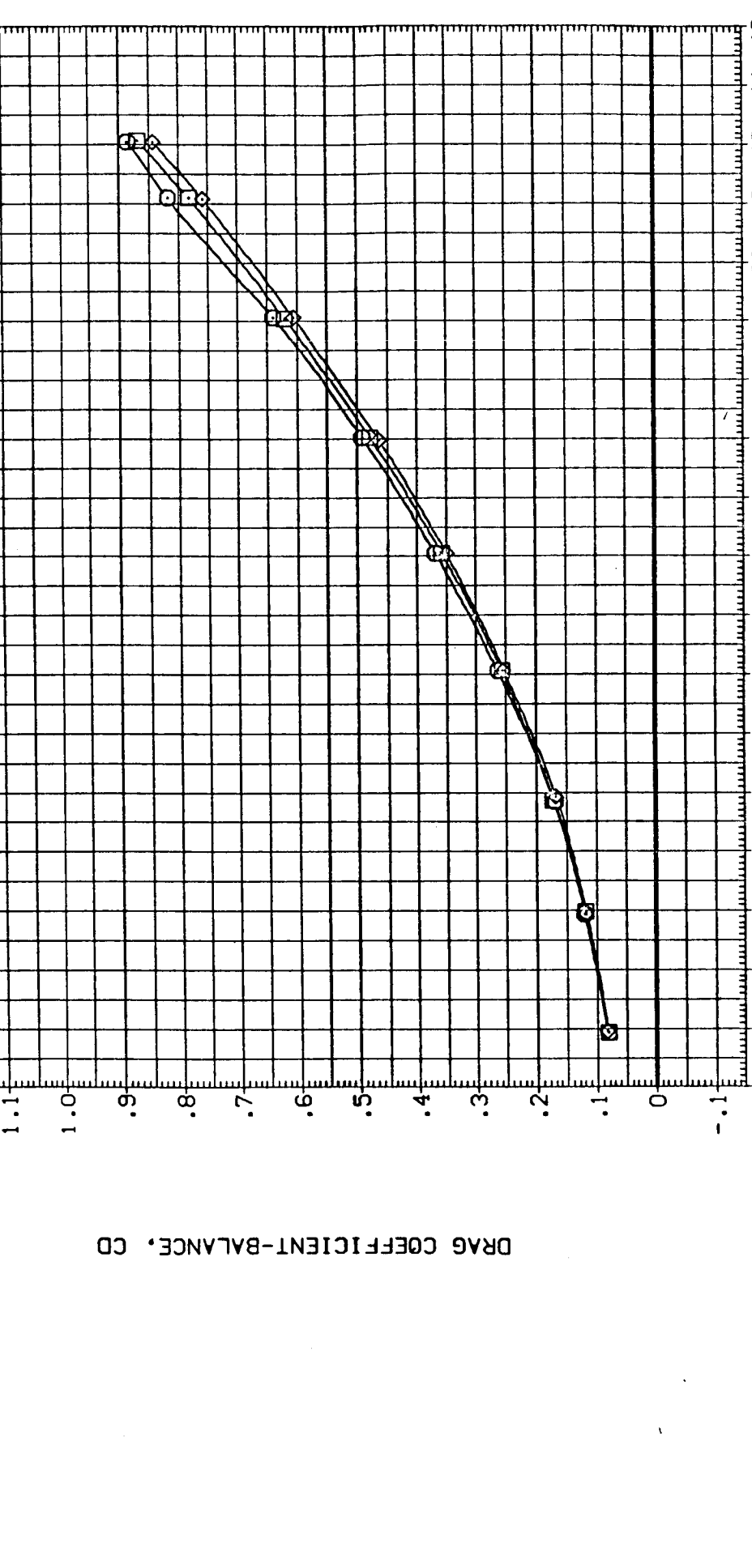


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    BETA    ELEVON    BOFLAP    SPOBRK    REFERENCE INFORMATION

(CEG0017)    AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)    .000    .000    -11.700    55.000    SREF 2690.0000 SQ.FT.

(CEG0018)    AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)    .000    -10.000    -11.700    55.000    LREF 474.8000 IN.

(CEG0019)    AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)    .000    -40.000    -11.700    55.000    BREF 936.6800 IN.

YMRP .0000 IN.YG    XMRP .0000 IN.XG    ZMRP .0000 IN.ZG    SCALE .0150

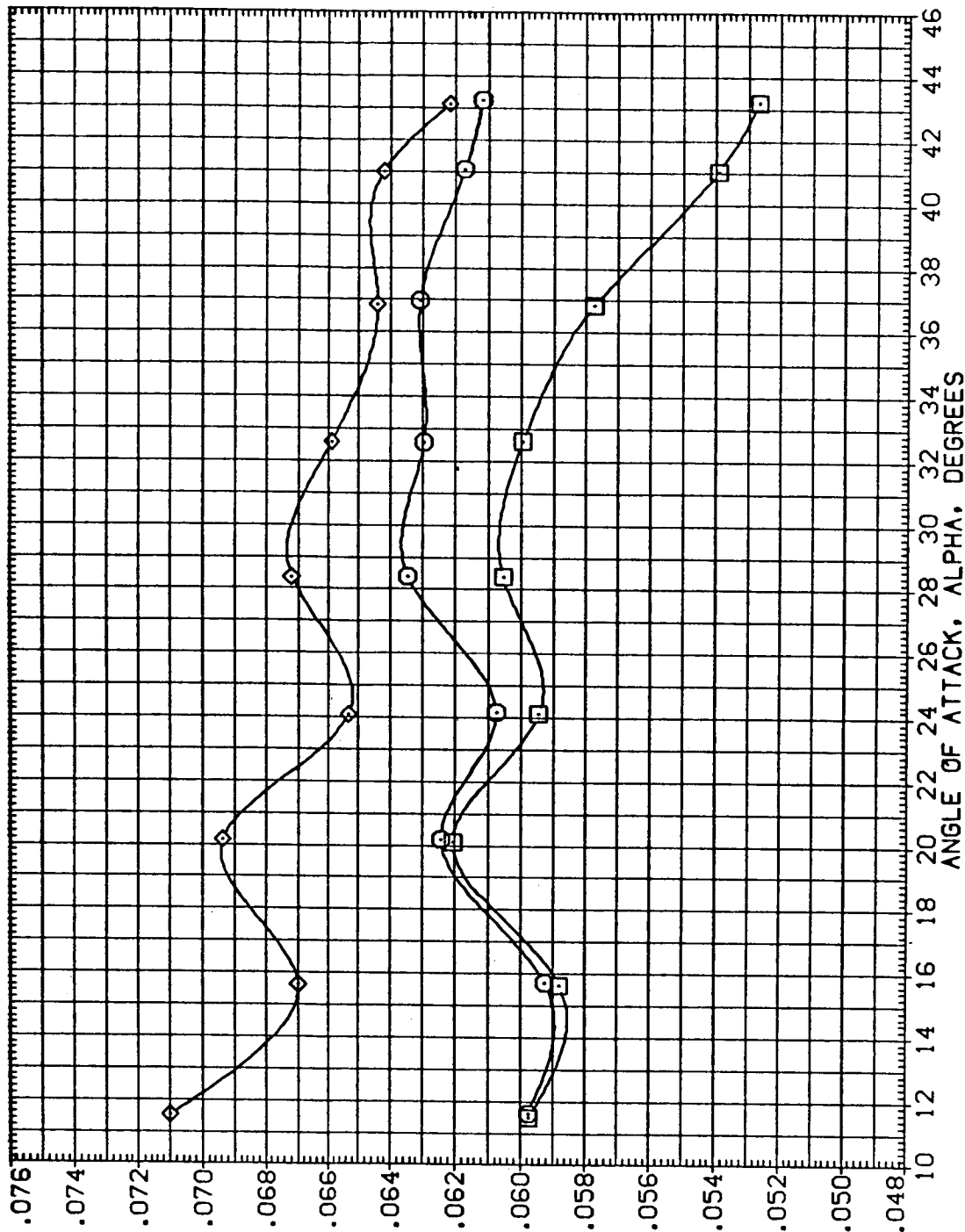
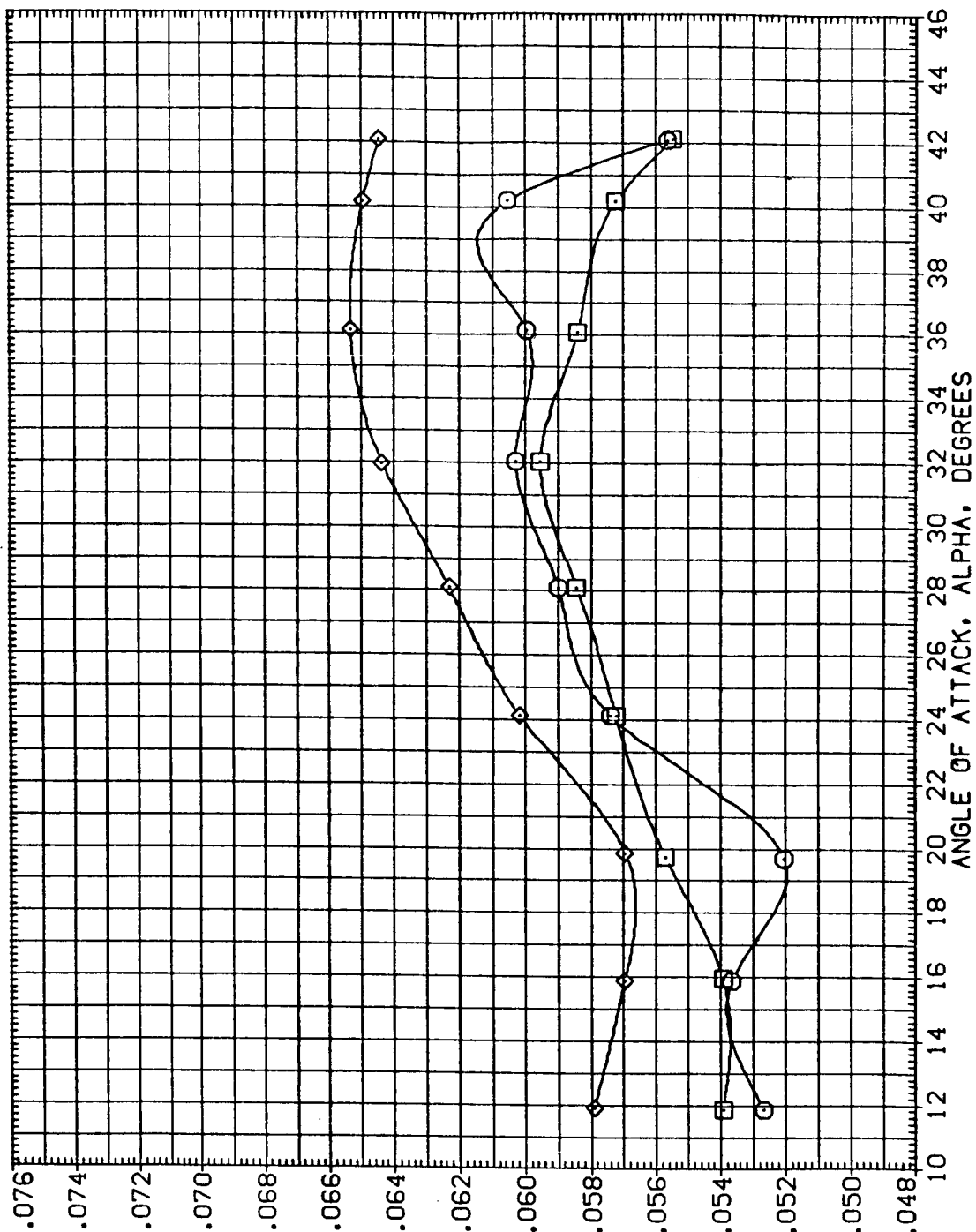


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

CA/MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.6000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150



AXIAL FORCE COEFFICIENT-BALANCE, CA

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0017)	AMES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0018)	AMES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

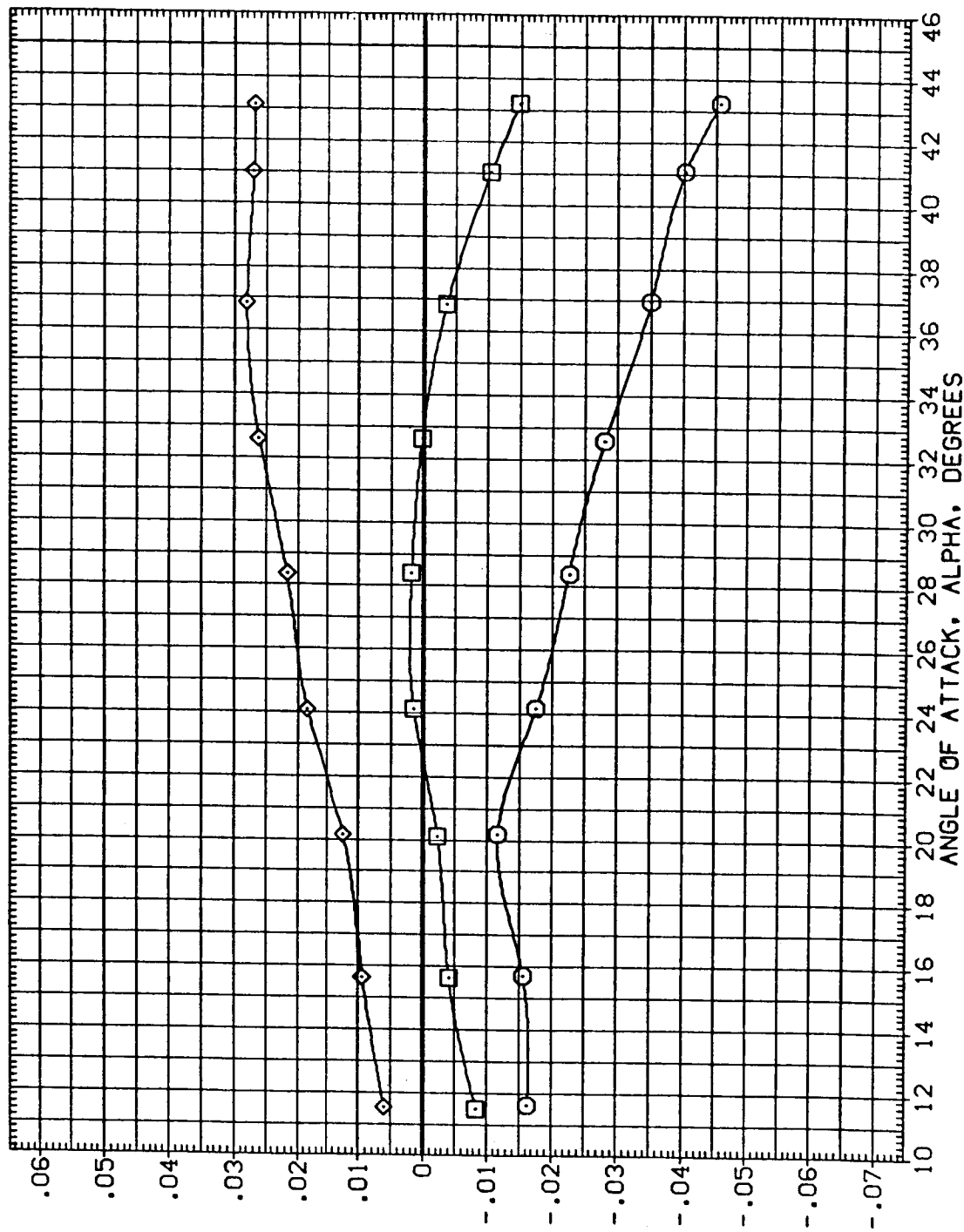


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWO

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0017)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0018)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

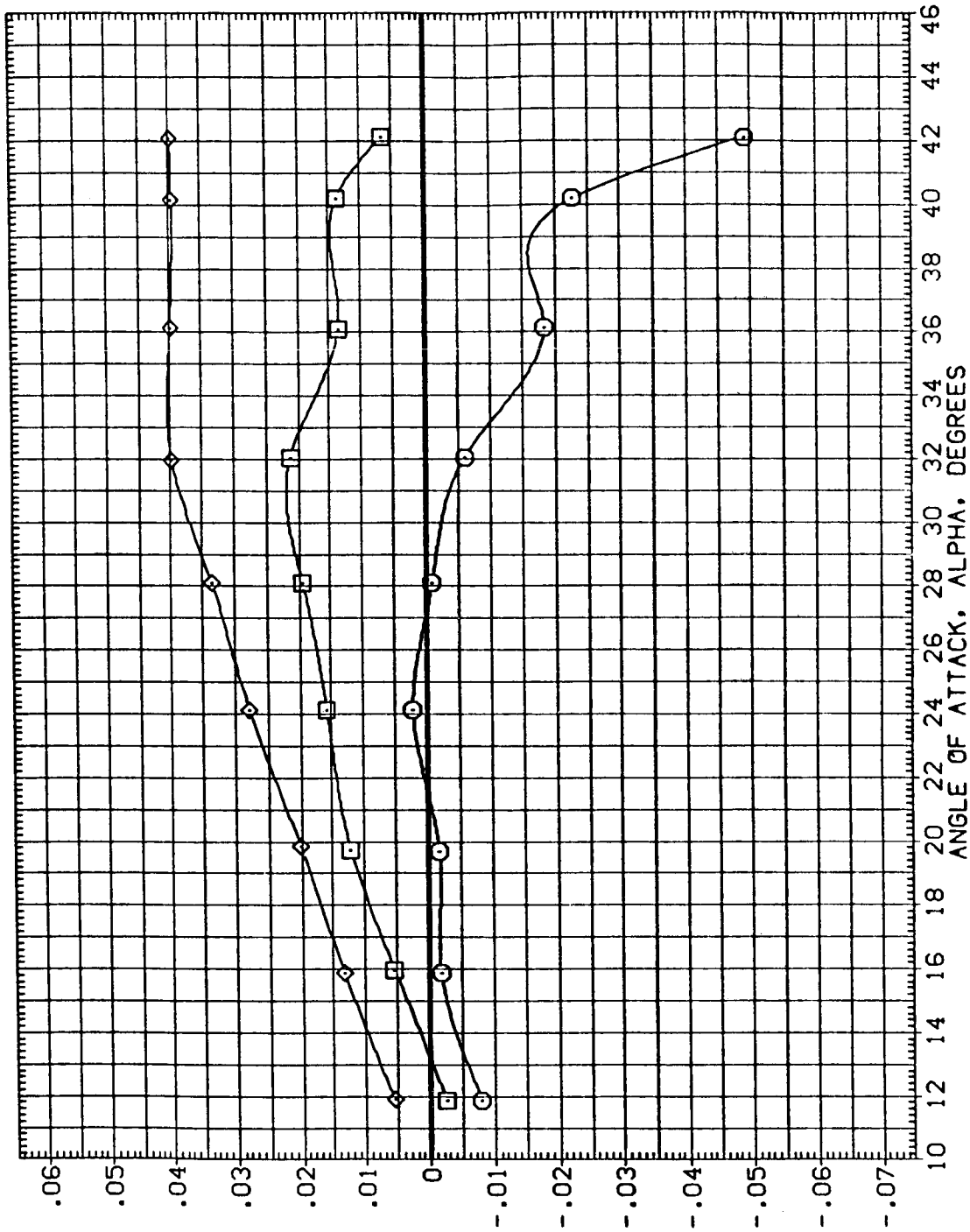


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0017)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0018)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

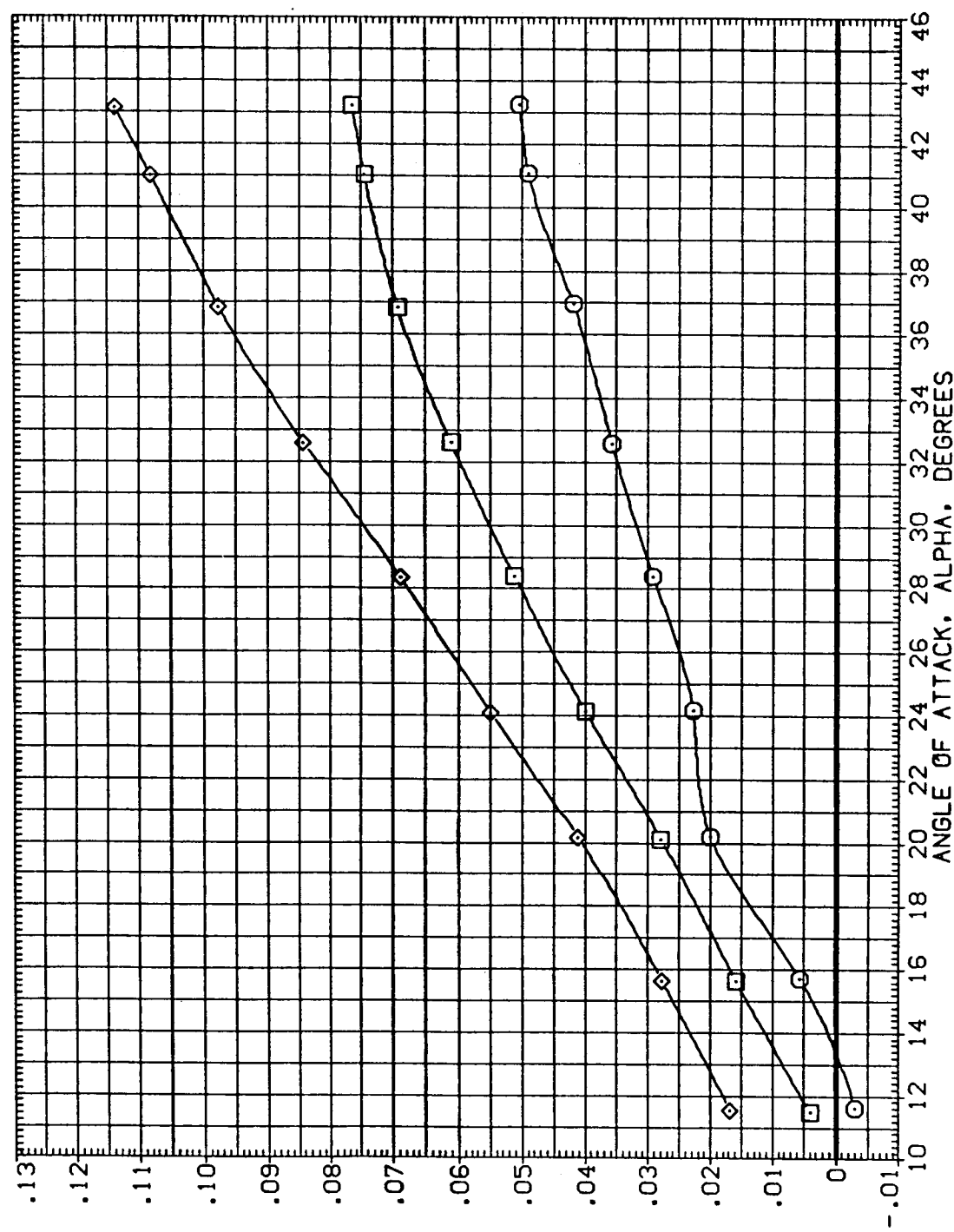


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(M)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0017)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0018)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

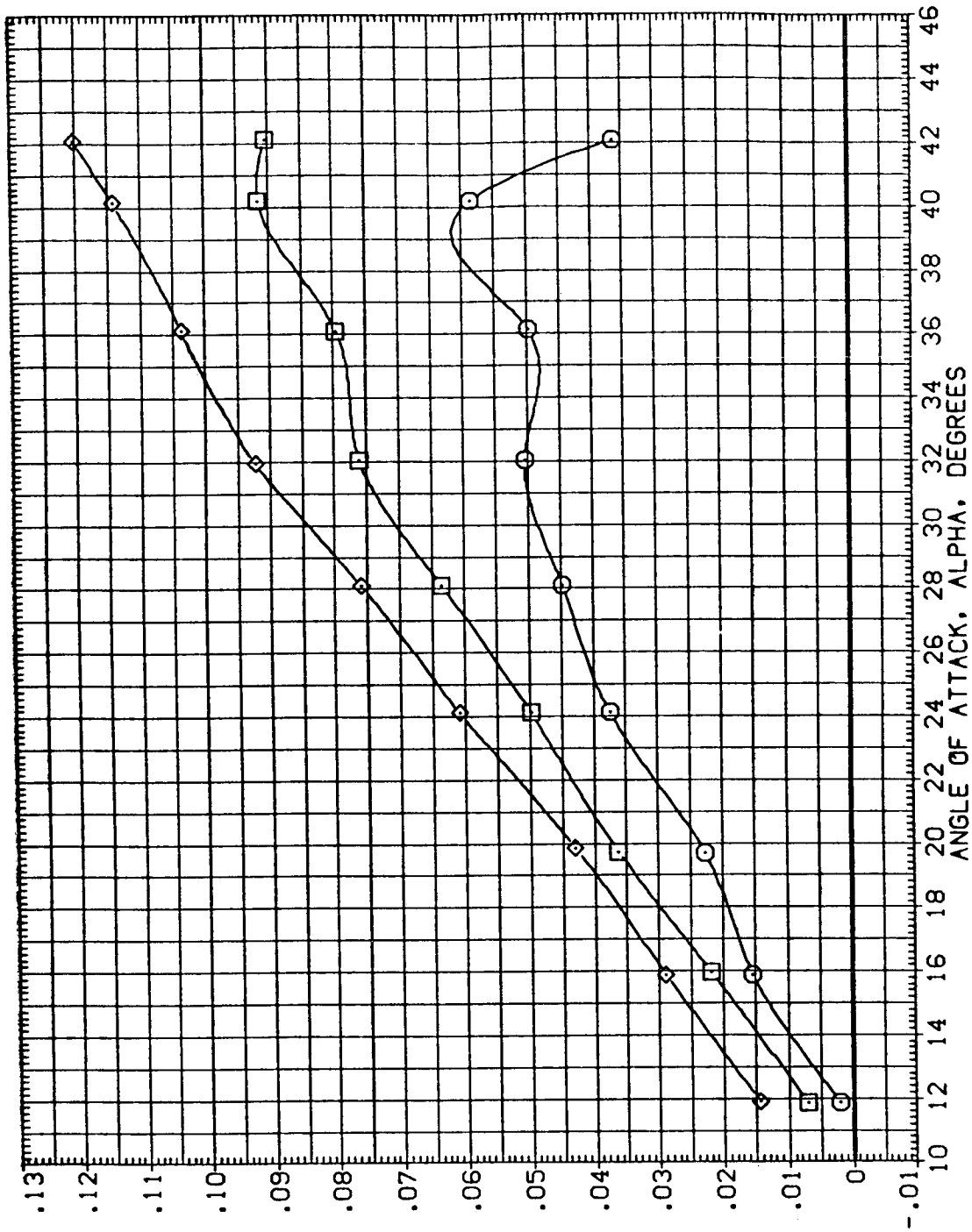


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CEQ017)	AMES 3.5-190 0A98 (011-M7-H14-N24-DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEQ018)	AMES 3.5-190 0A98 (011-M7-H14-N24-DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CEQ019)	AMES 3.5-190 0A98 (011-M7-H14-N24-DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150



FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CEQ017)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEQ018)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CEQ019)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

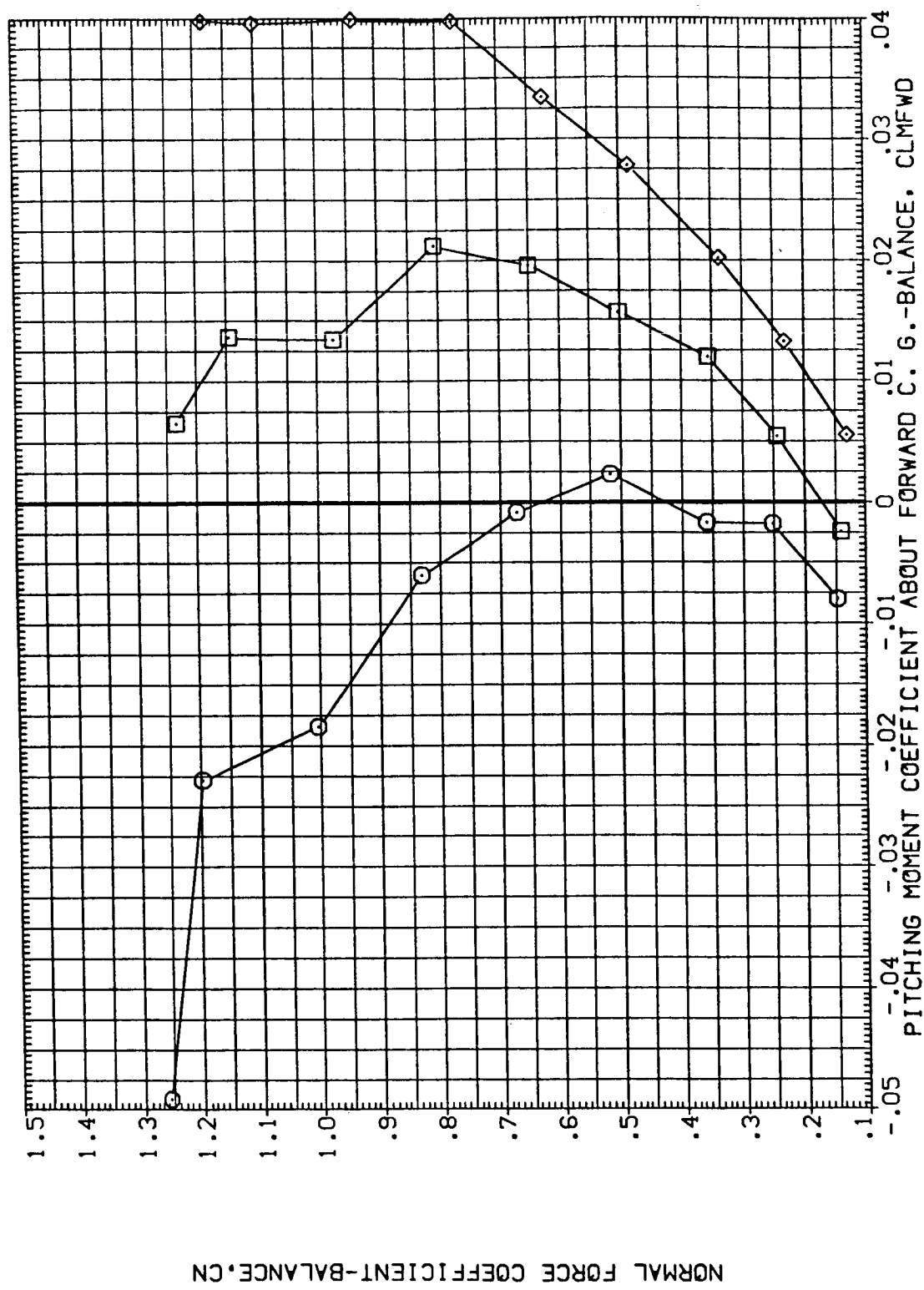


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(CEQ017)	AMES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CEQ018)	AMES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CEQ019)	AMES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

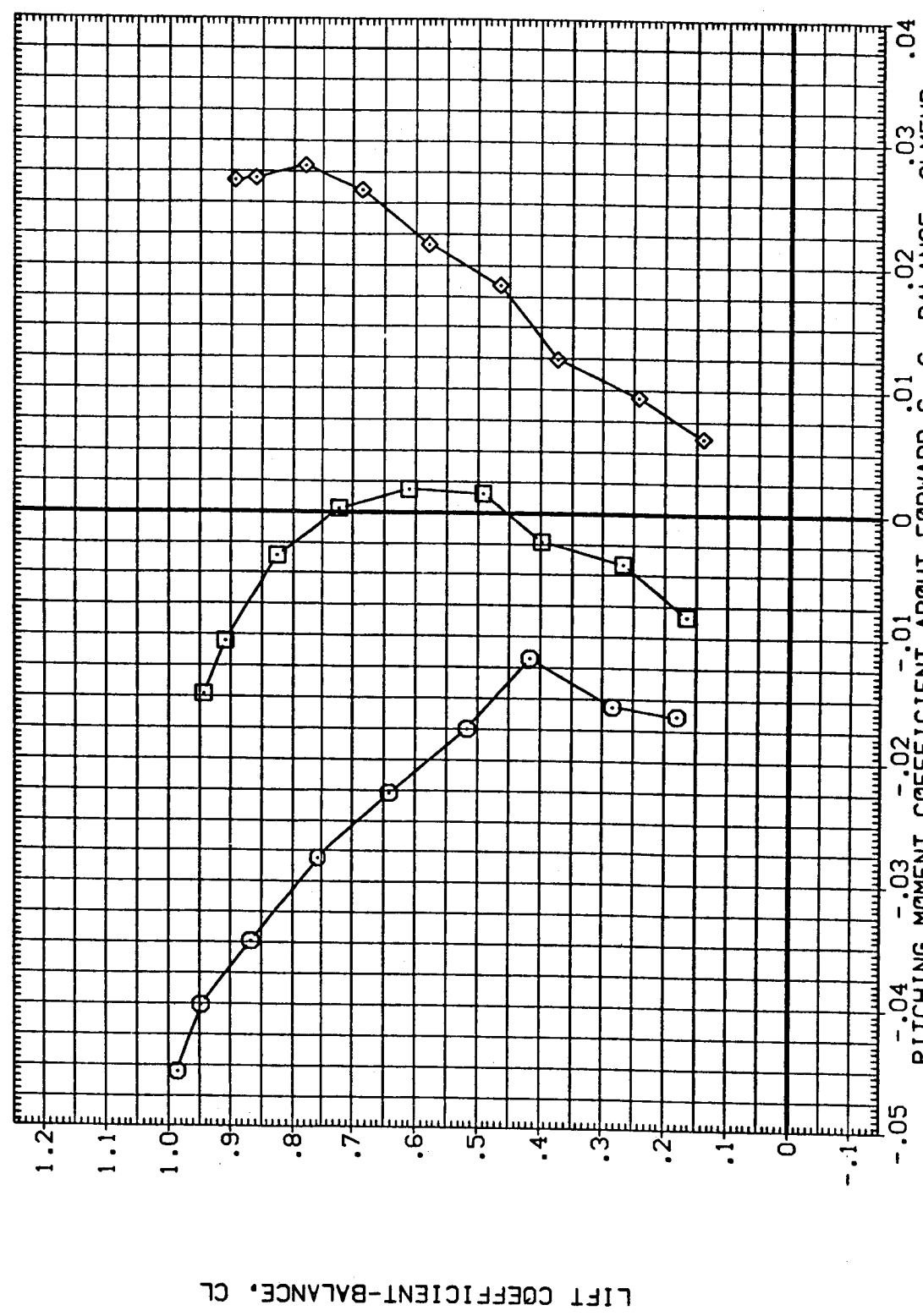
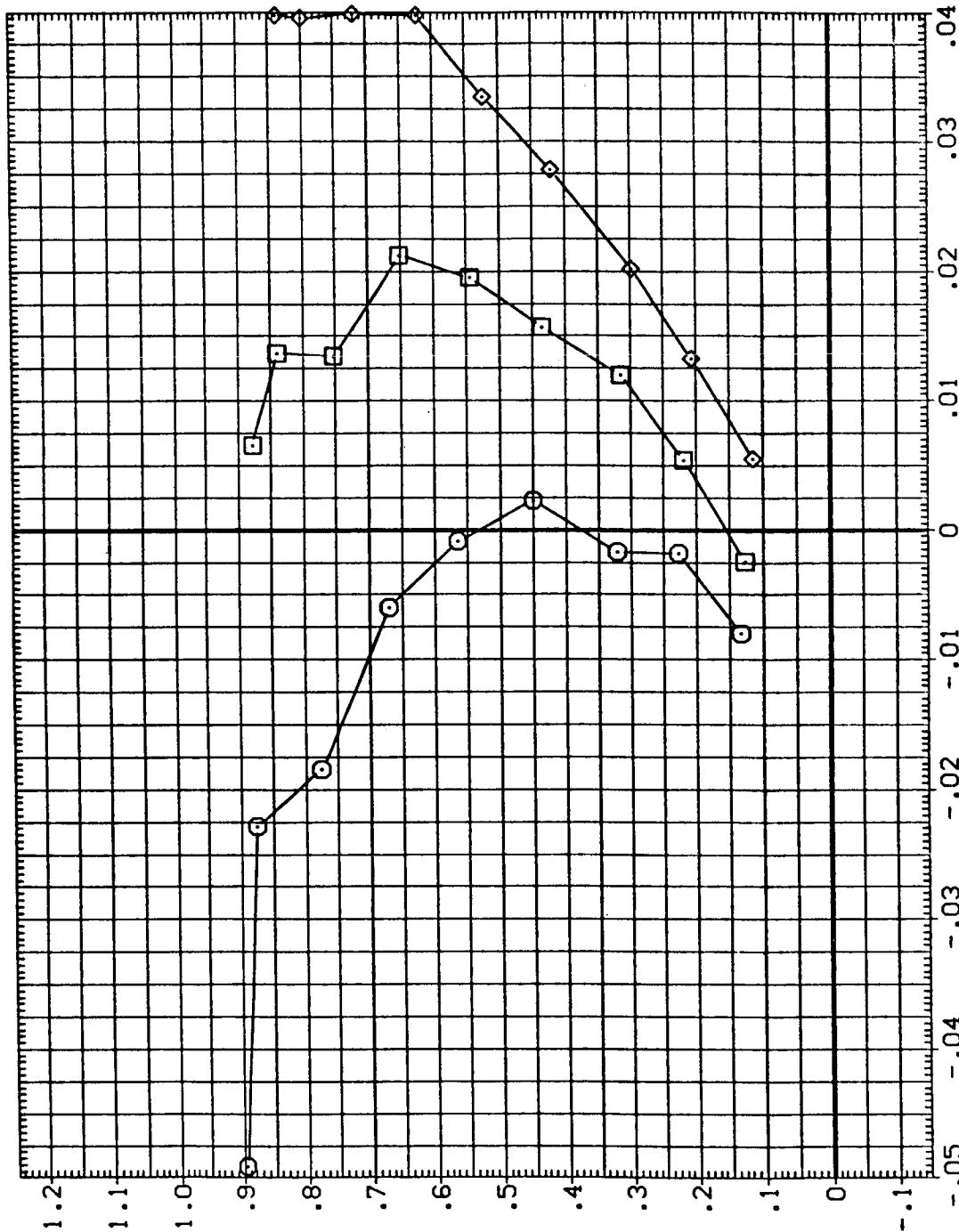


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 5.25  
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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.Y0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150



LIFT COEFFICIENT-BALANCE, CL

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C.G.-BALANCE, CLMFW

FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(CE0017)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0018)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

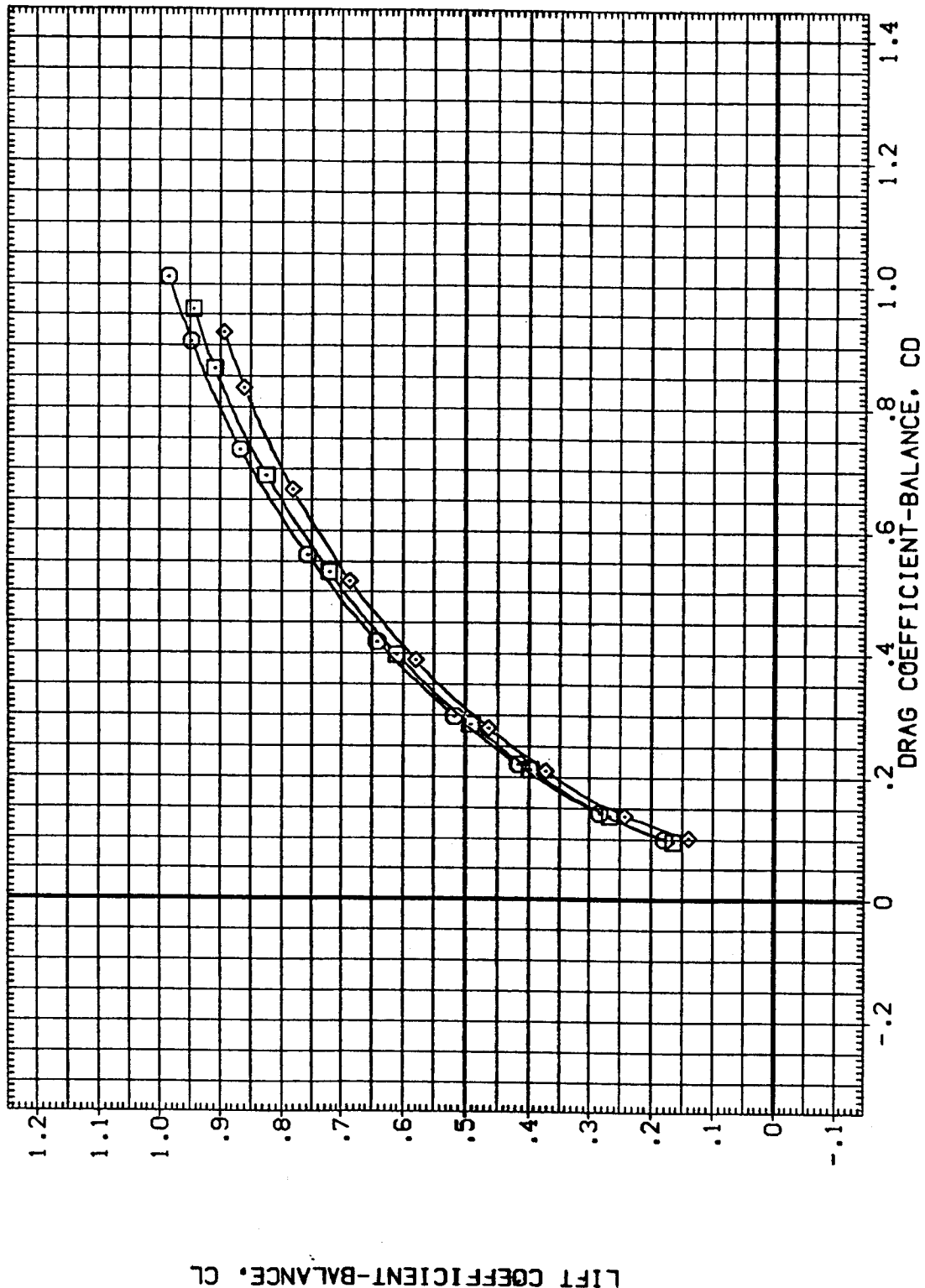


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 5.25

DA 100



**(B)MACH = 10.27**



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEG0017)	AMES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEG0018)	AMES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EEG0019)	AMES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE 375.0000 IN.Z0
						.0150

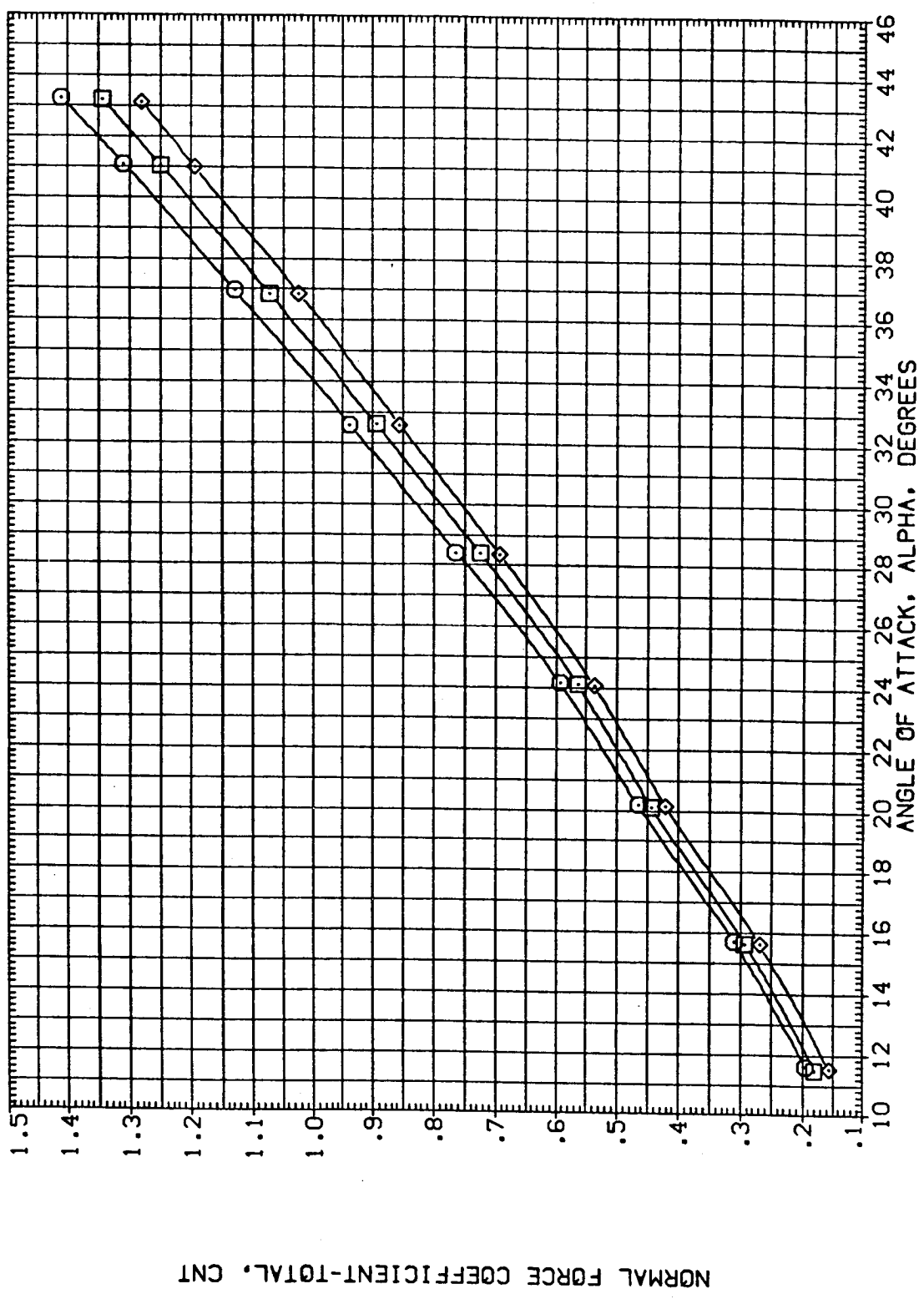


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

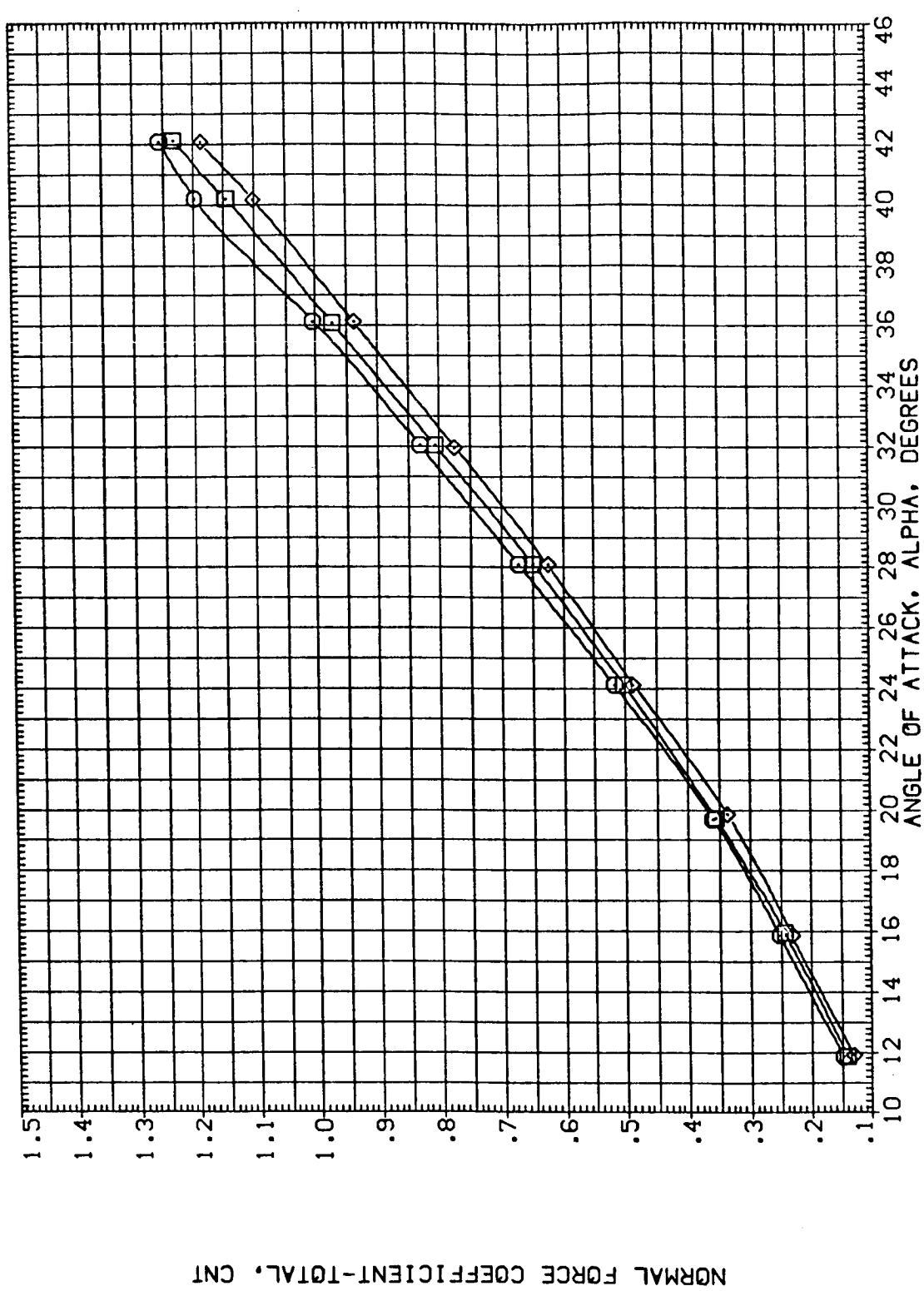


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDCLAP	SPDBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

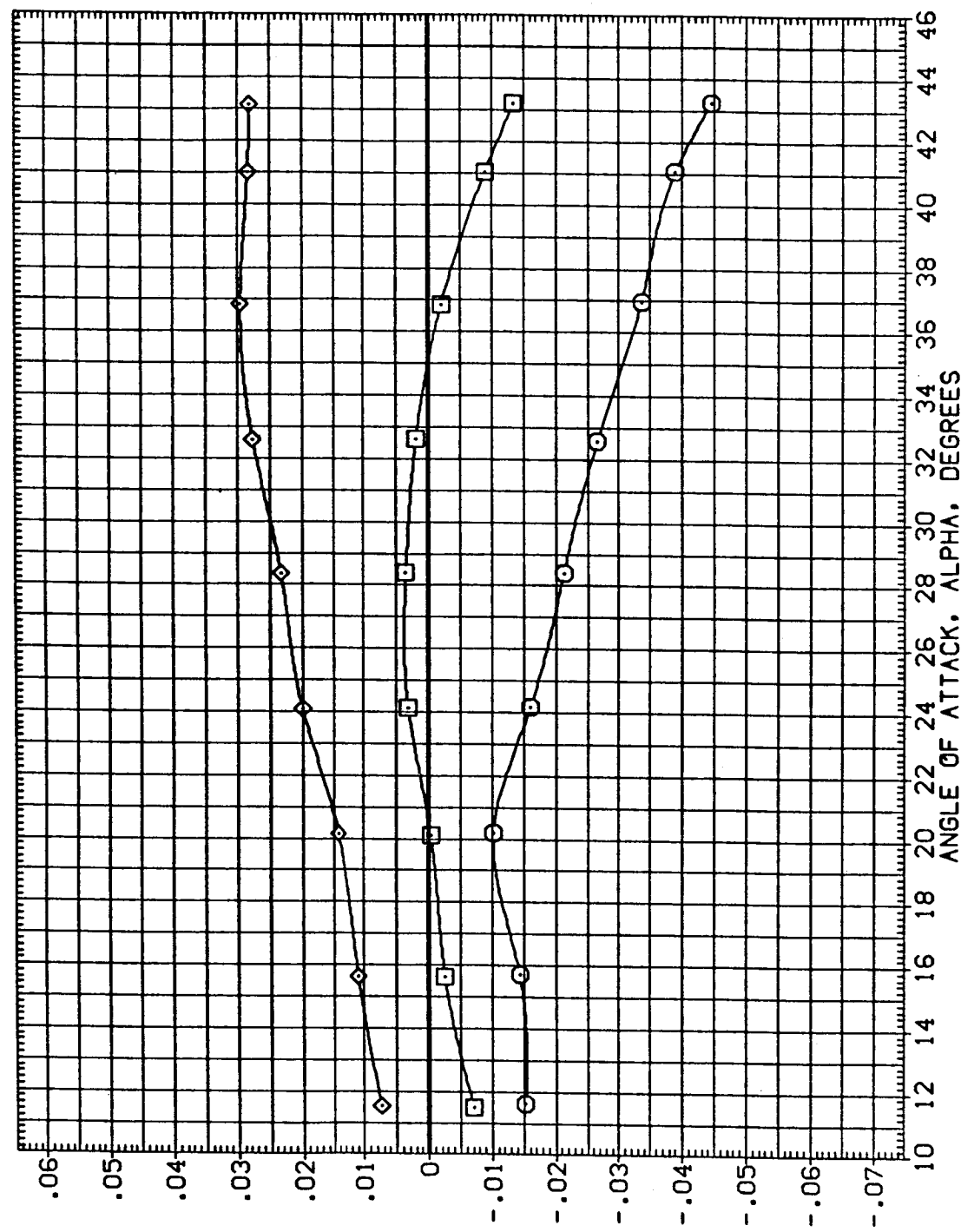


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEO017)	AVES 3.5-190 0A98 (01)-M7-M14-N24+DUMY STING)	.000	.000	-11.700	SREF	2690.0000 SQ.FT.
(EEO018)	AVES 3.5-190 0A98 (01)-M7-M14-N24+DUMY STING)	.000	-10.000	-11.700	LREF	474.8000 IN.
(EEO019)	AVES 3.5-190 0A98 (01)-M7-M14-N24+DUMY STING)	.000	-40.000	-11.700	BREF	936.6800 IN.
					XMRP	1076.7000 IN.X0
					YMRP	.0000 IN.Y0
					ZMRP	.0000 IN.Z0
					SCALE	.0150

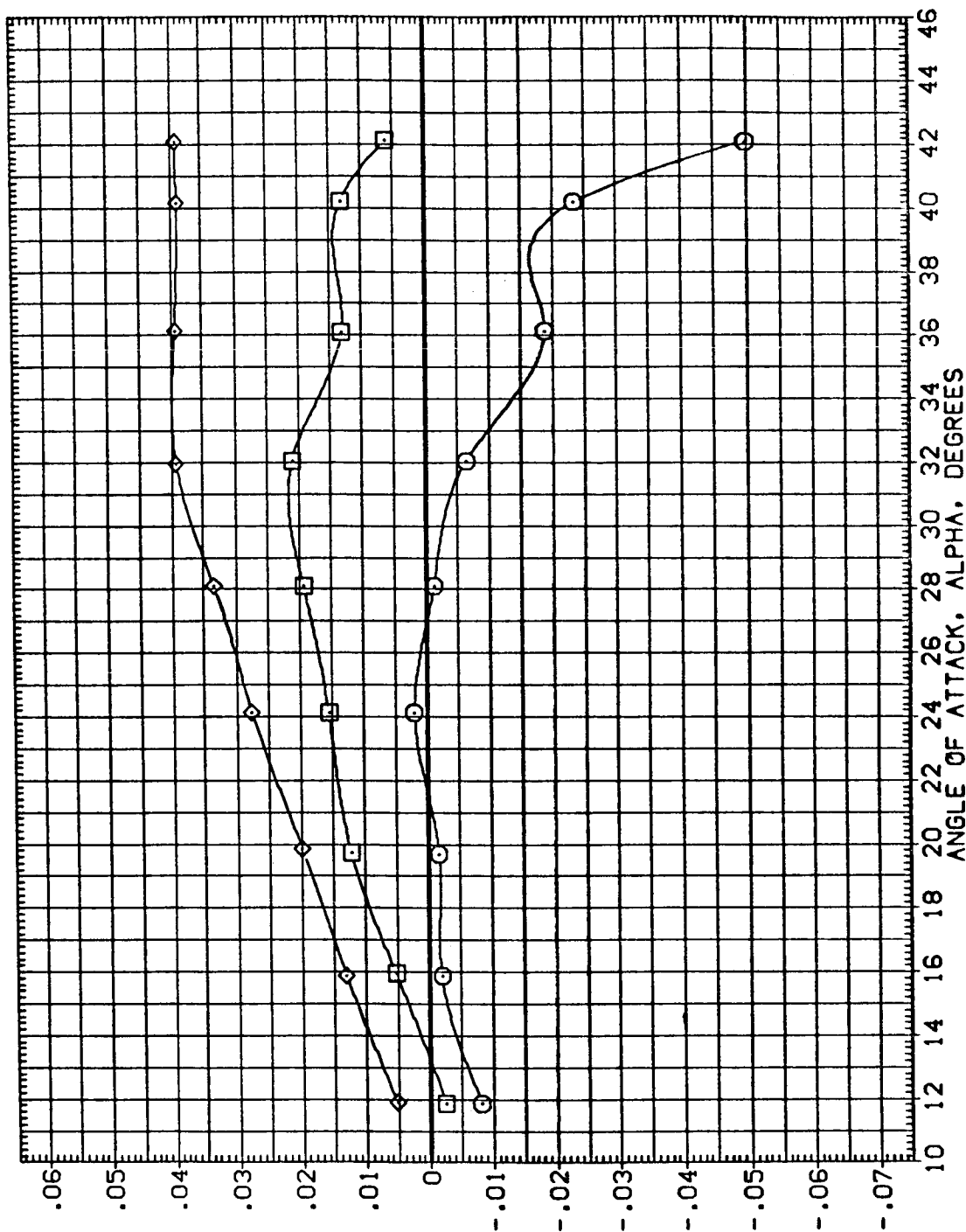


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

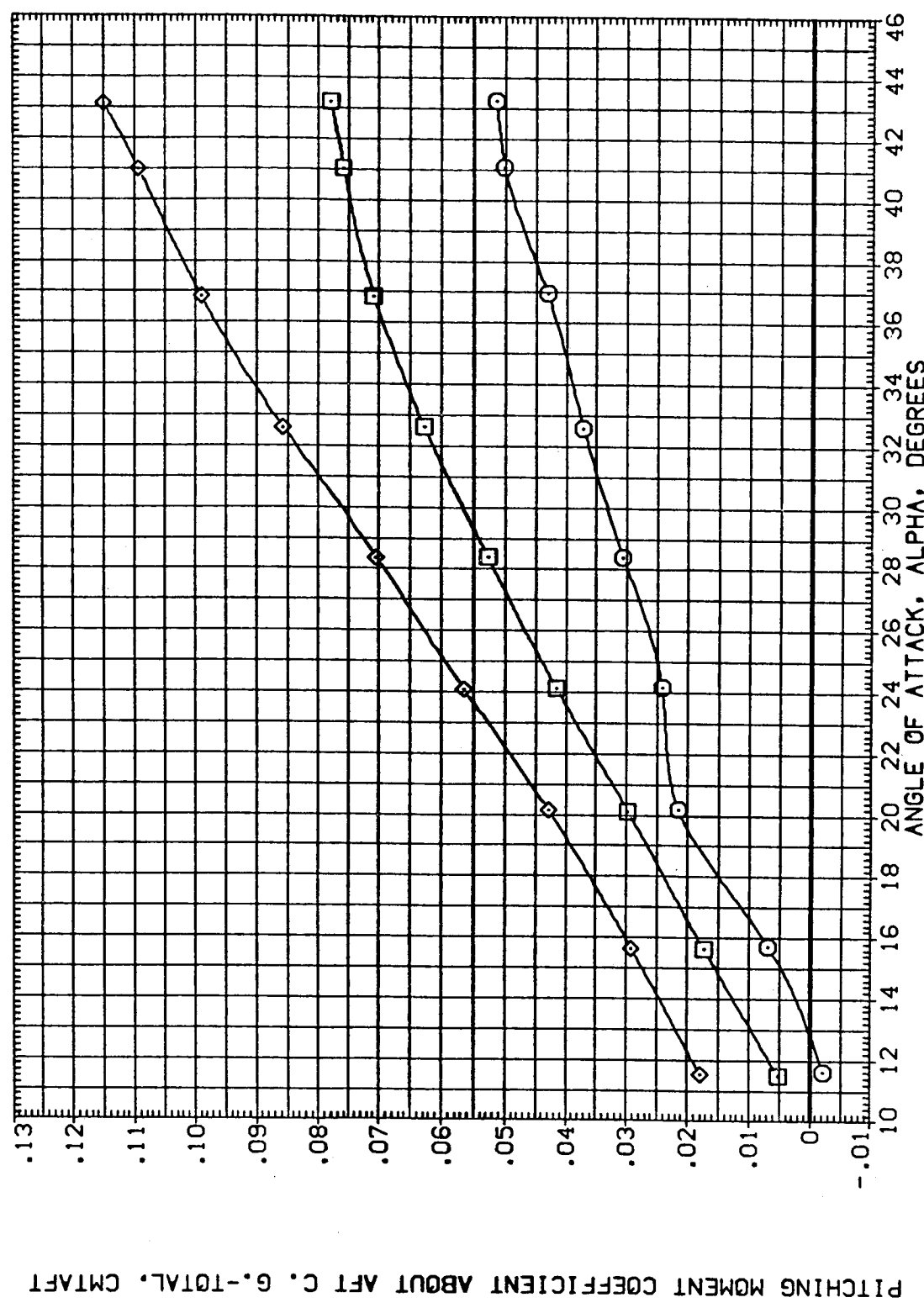


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(M)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2630.0000 SQ.FT.
(EE0018)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-TOTAL, CM/AF

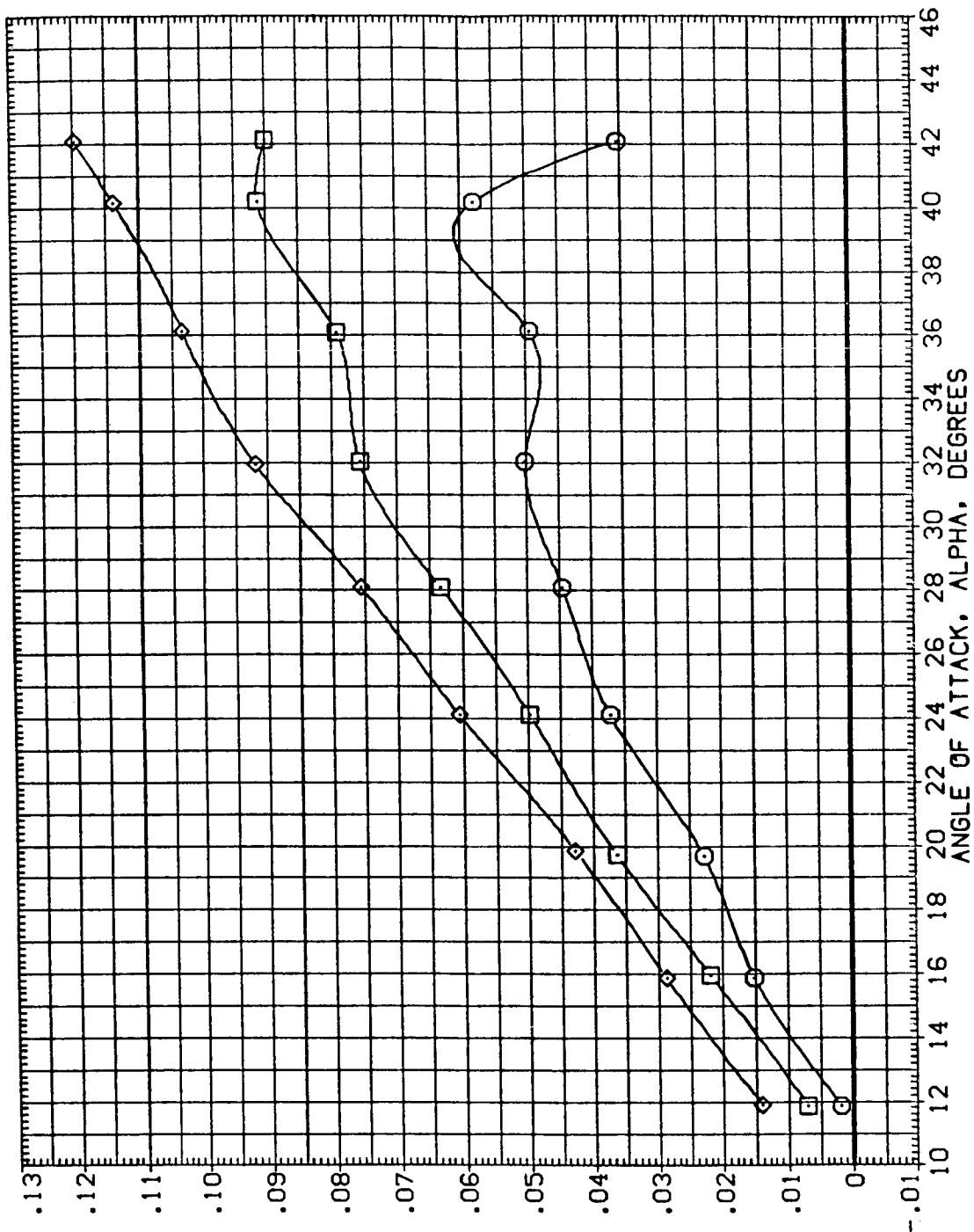


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

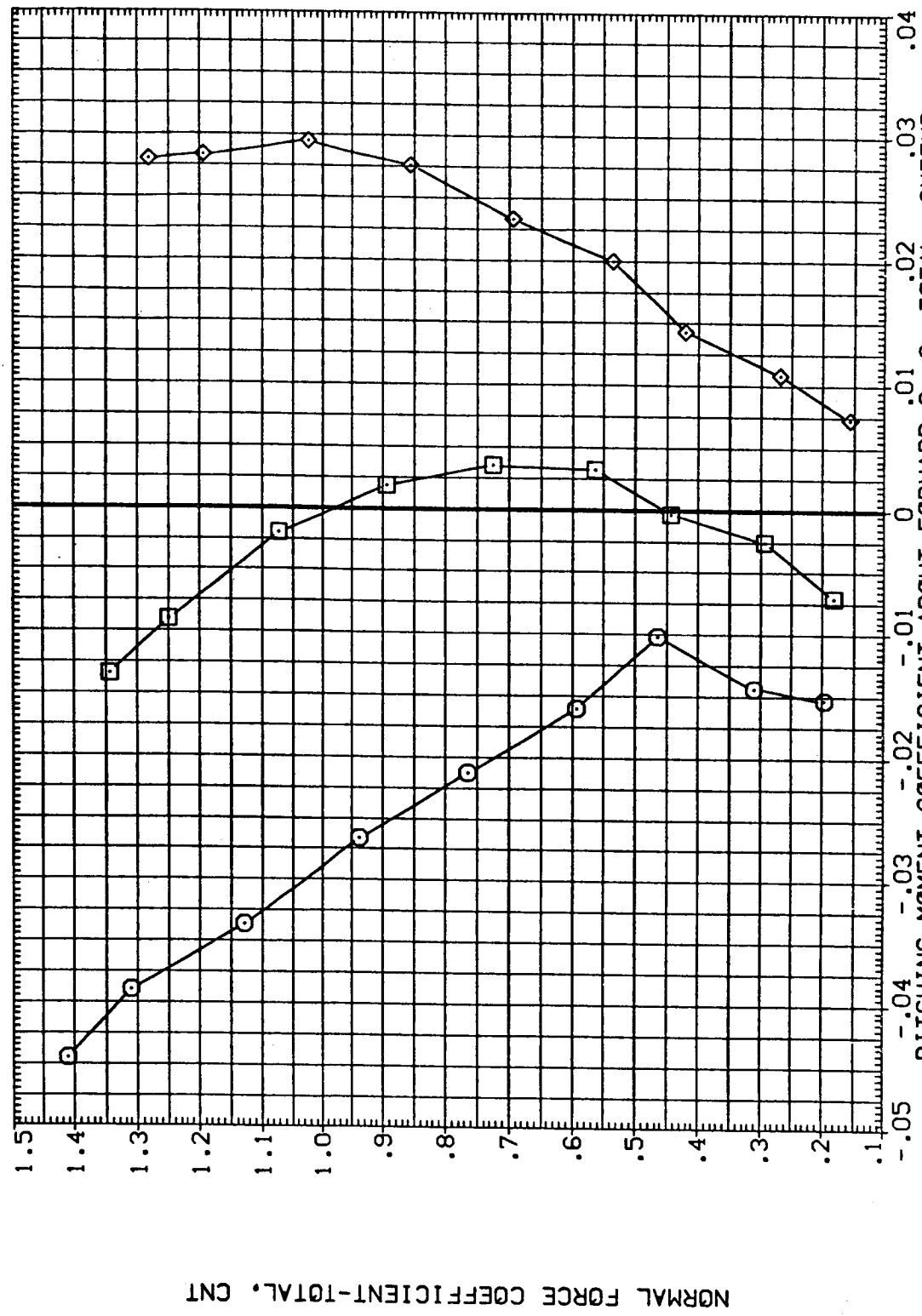


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6900 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

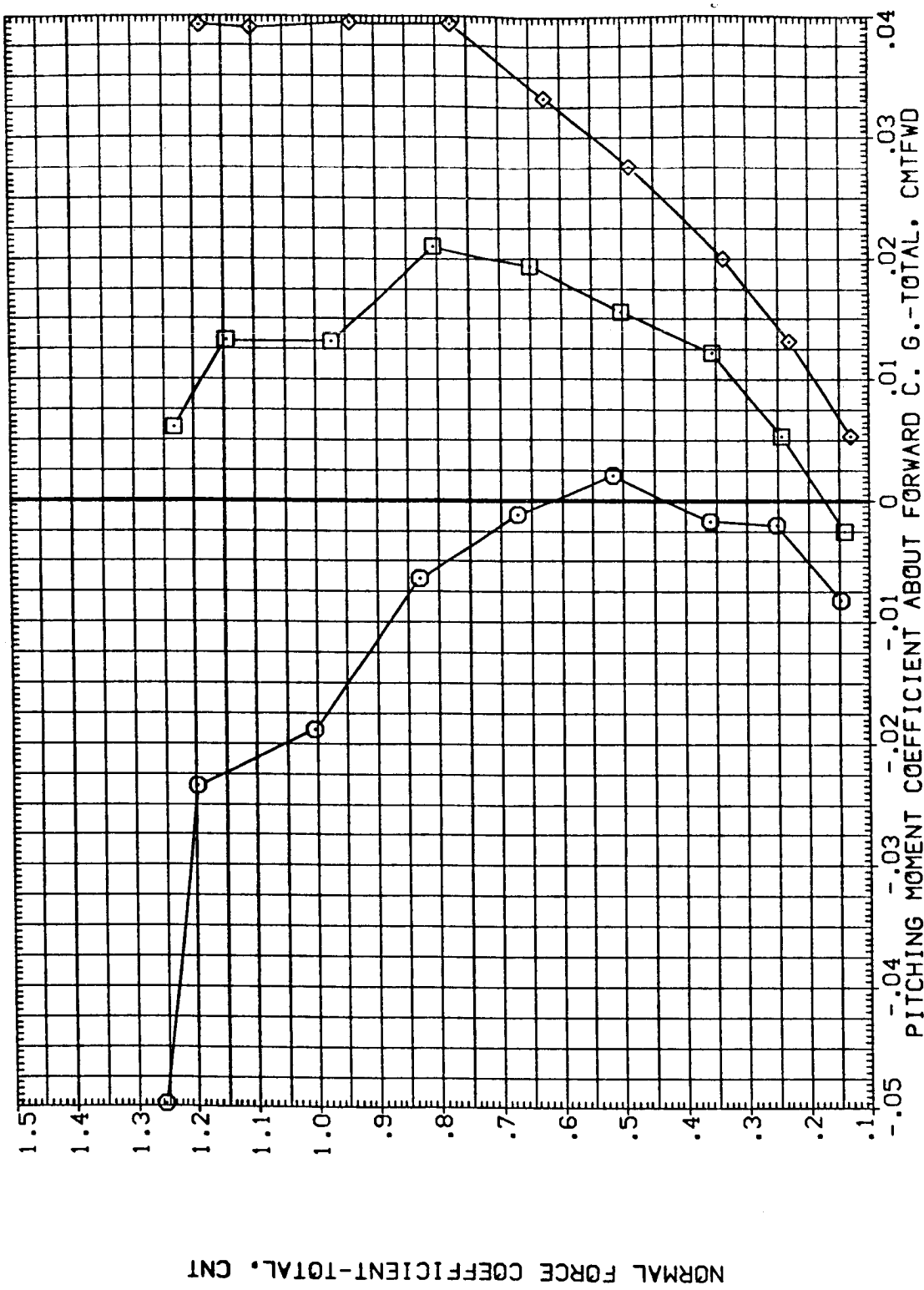


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EEQ017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EEQ019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

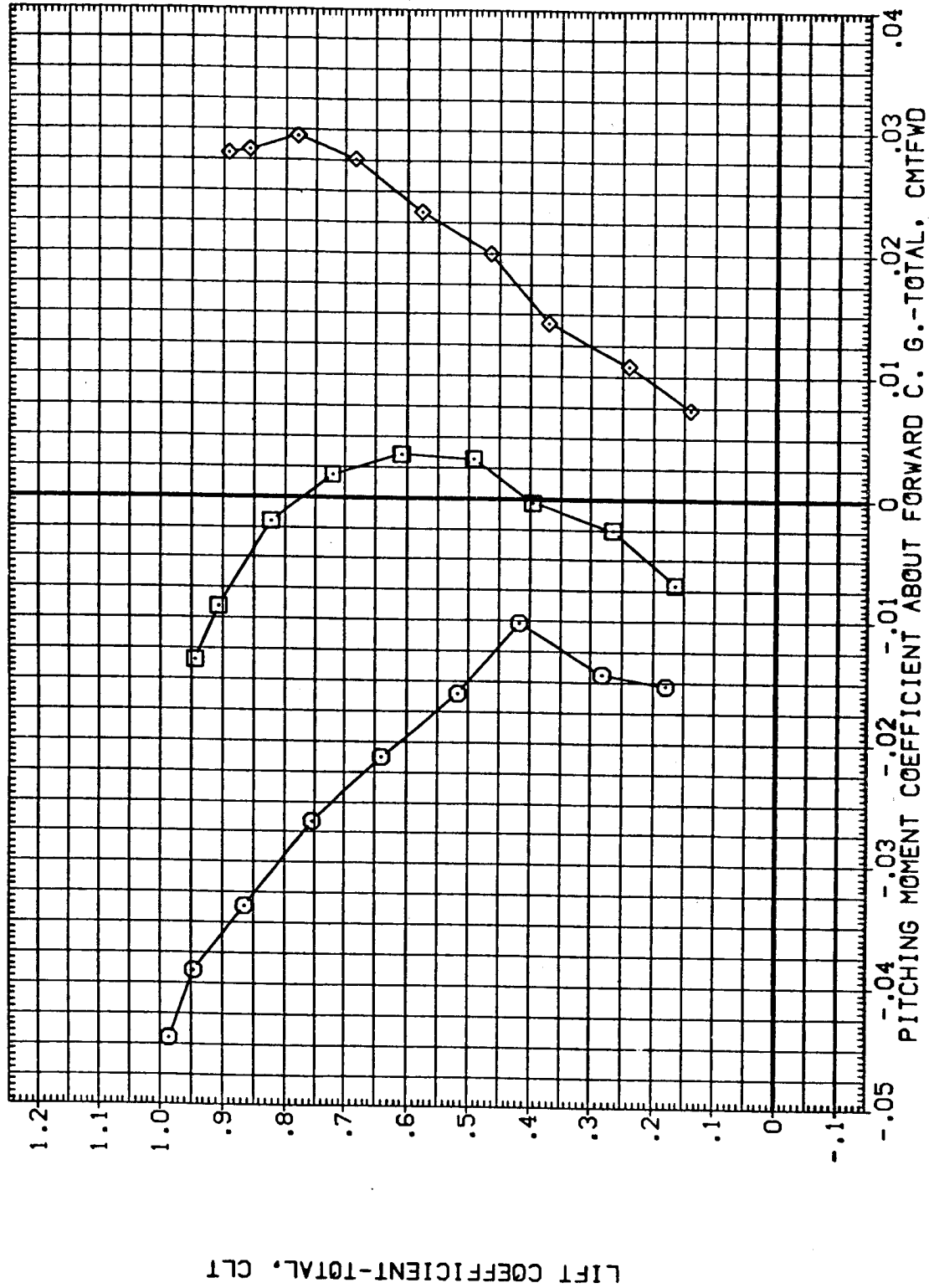


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

LIFT COEFFICIENT-TOTAL, CLT

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

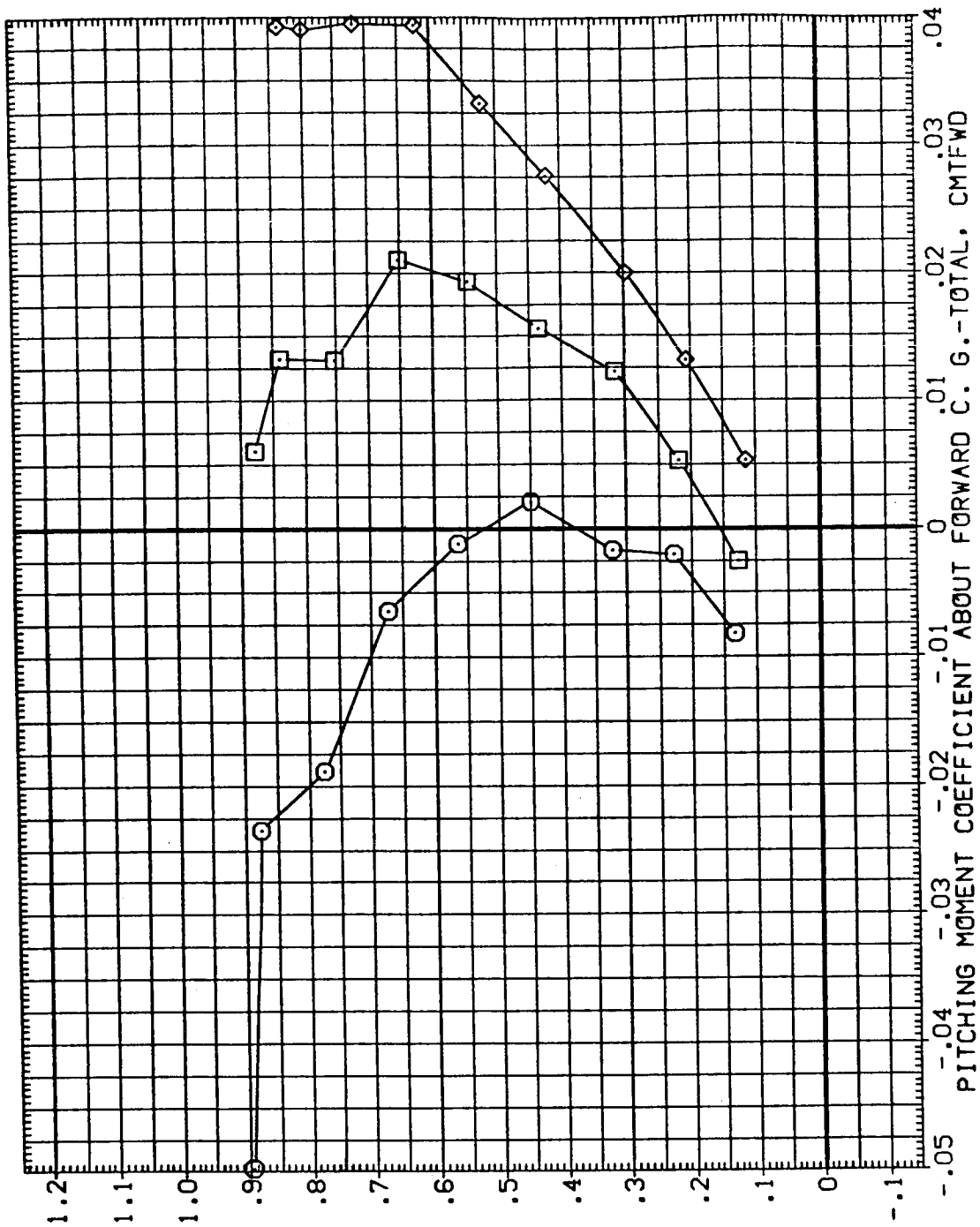


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

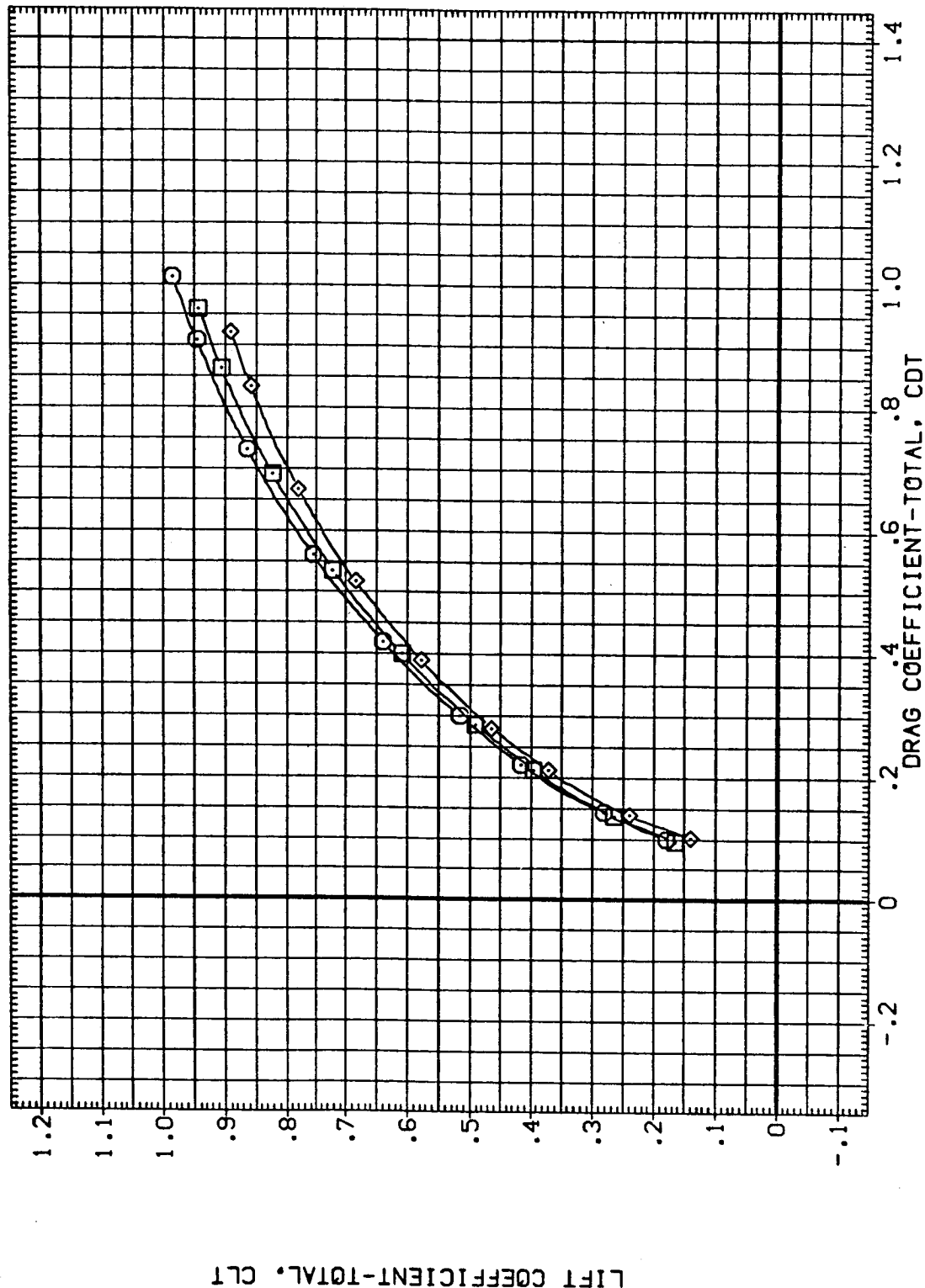


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 5.25  
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DATA SET SYMBOL  
(EE0017)  
(EE0018)  
(EE0019)

CONFIGURATION DESCRIPTION  
AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)  
AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)  
AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

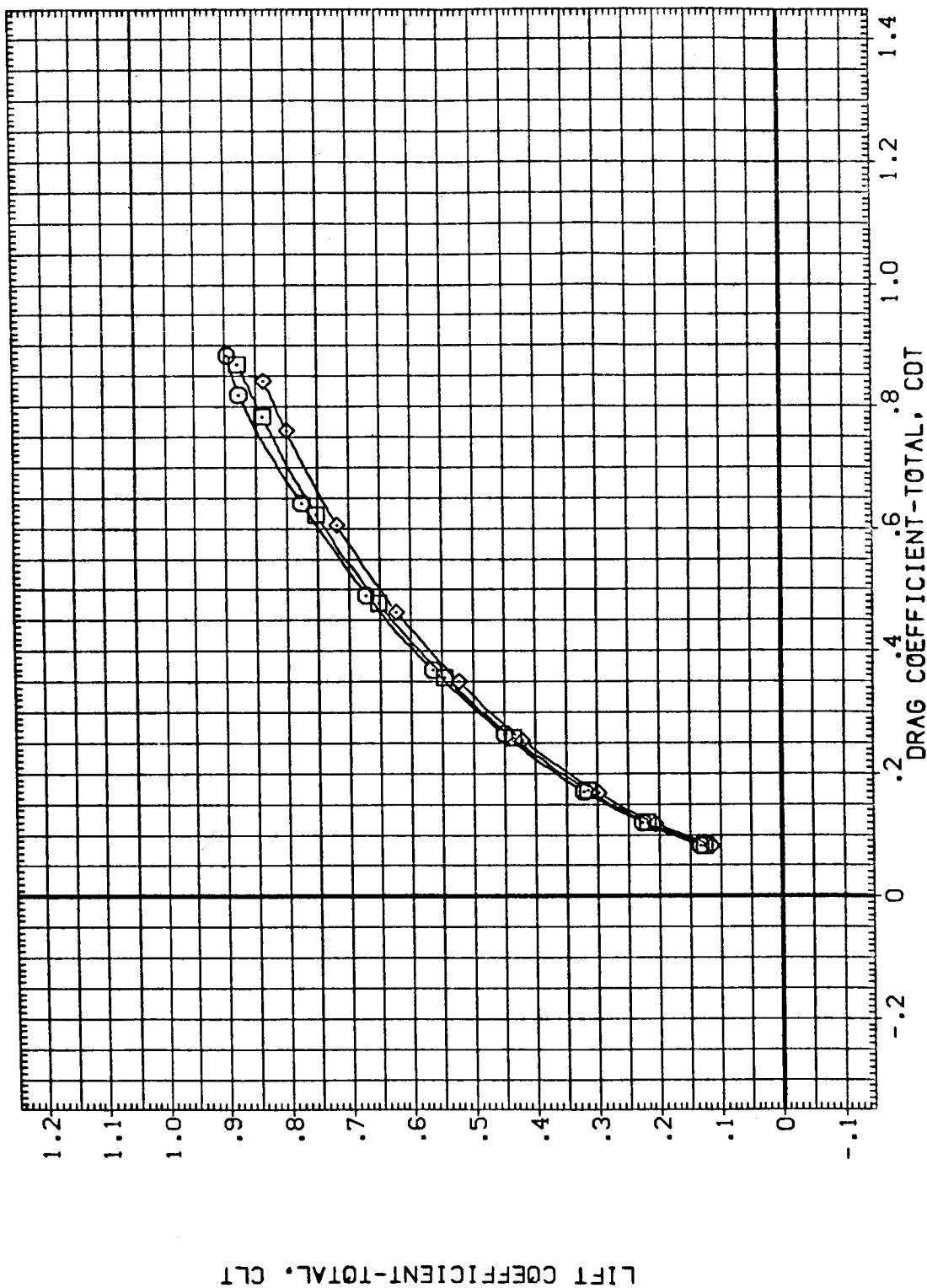


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 536.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

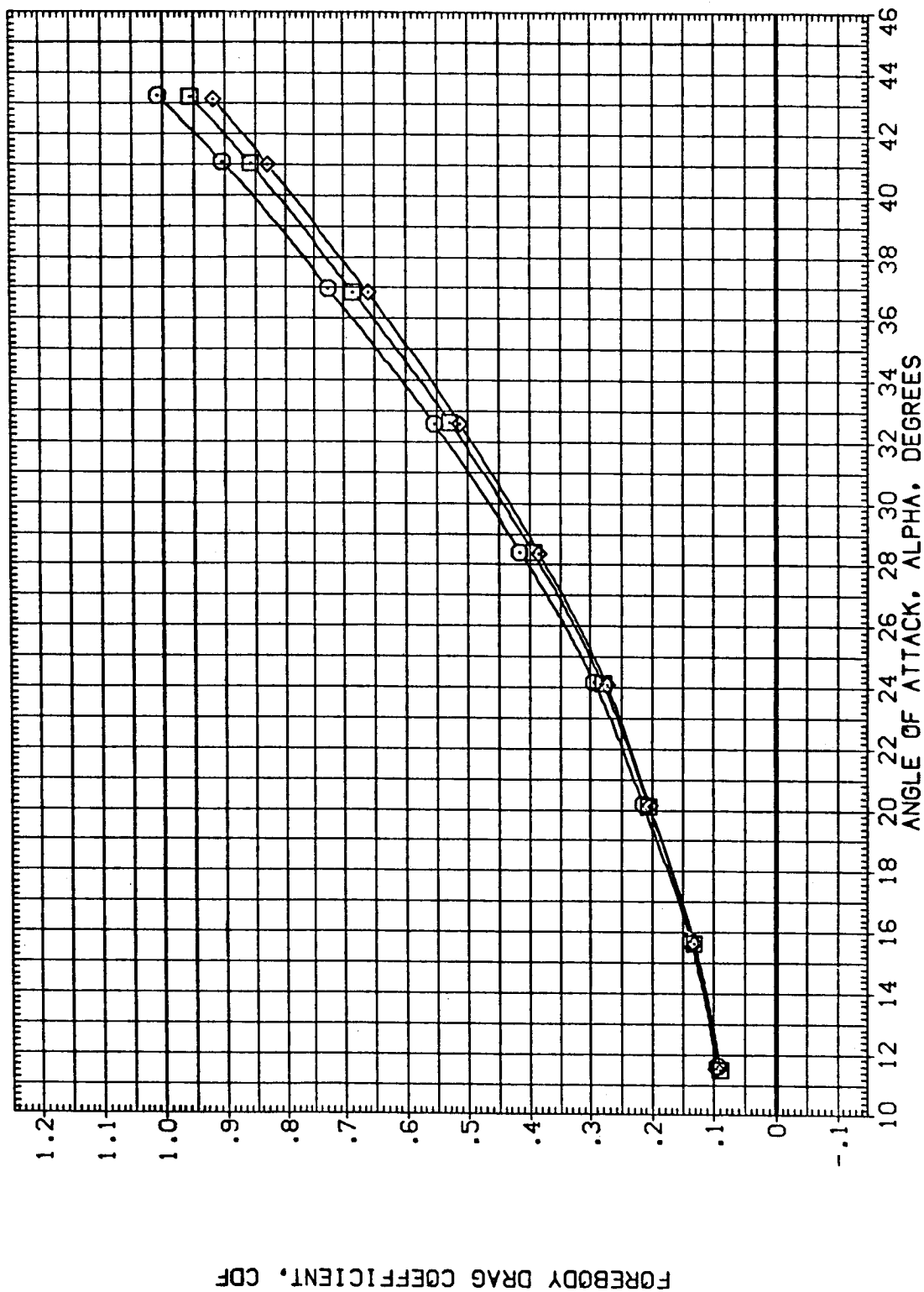


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP 375.0000 IN.Y0
						SCALE .0150

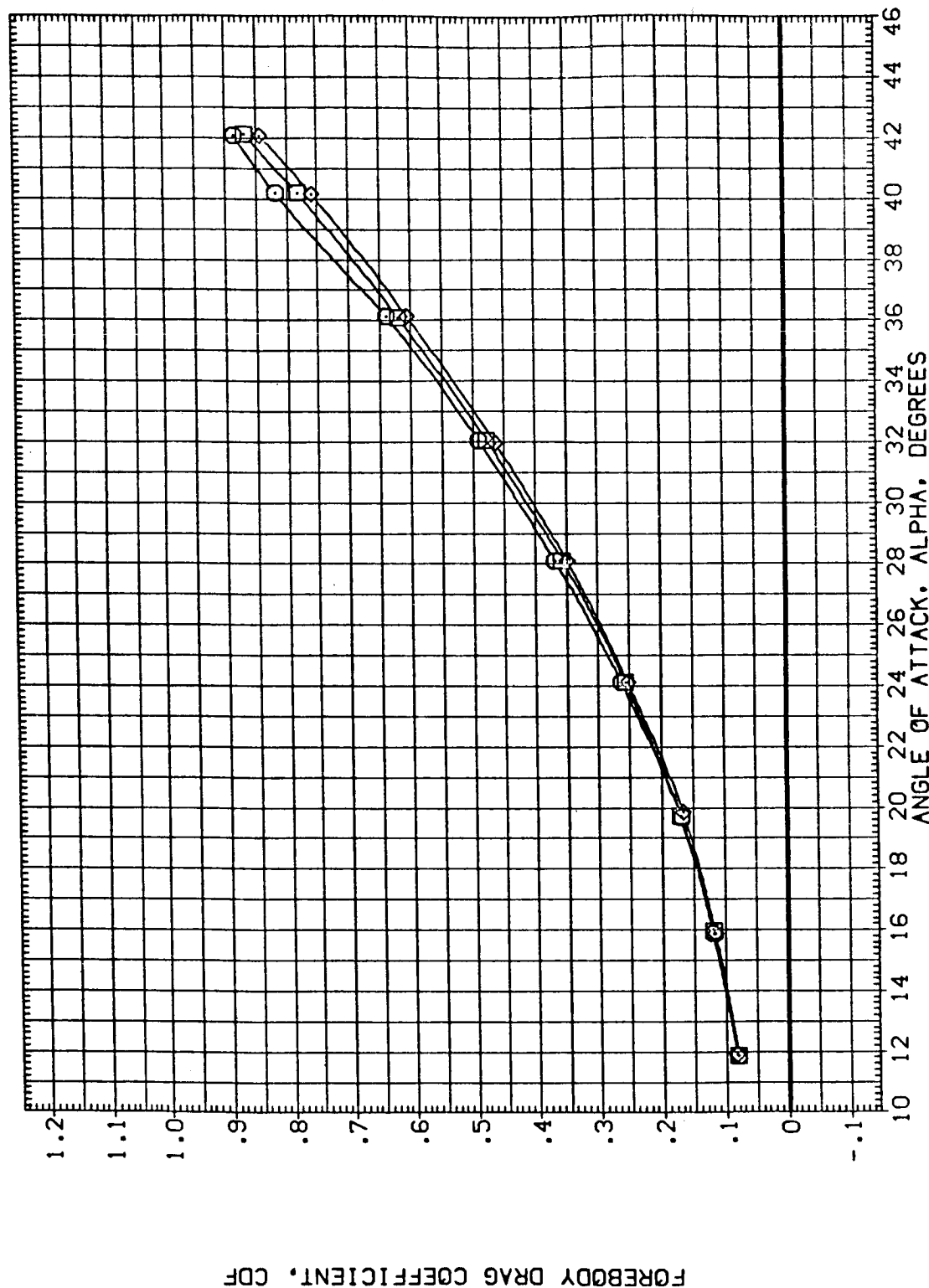


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 GA98 (011-17-H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 GA98 (011-17-H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 GA98 (011-17-H14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

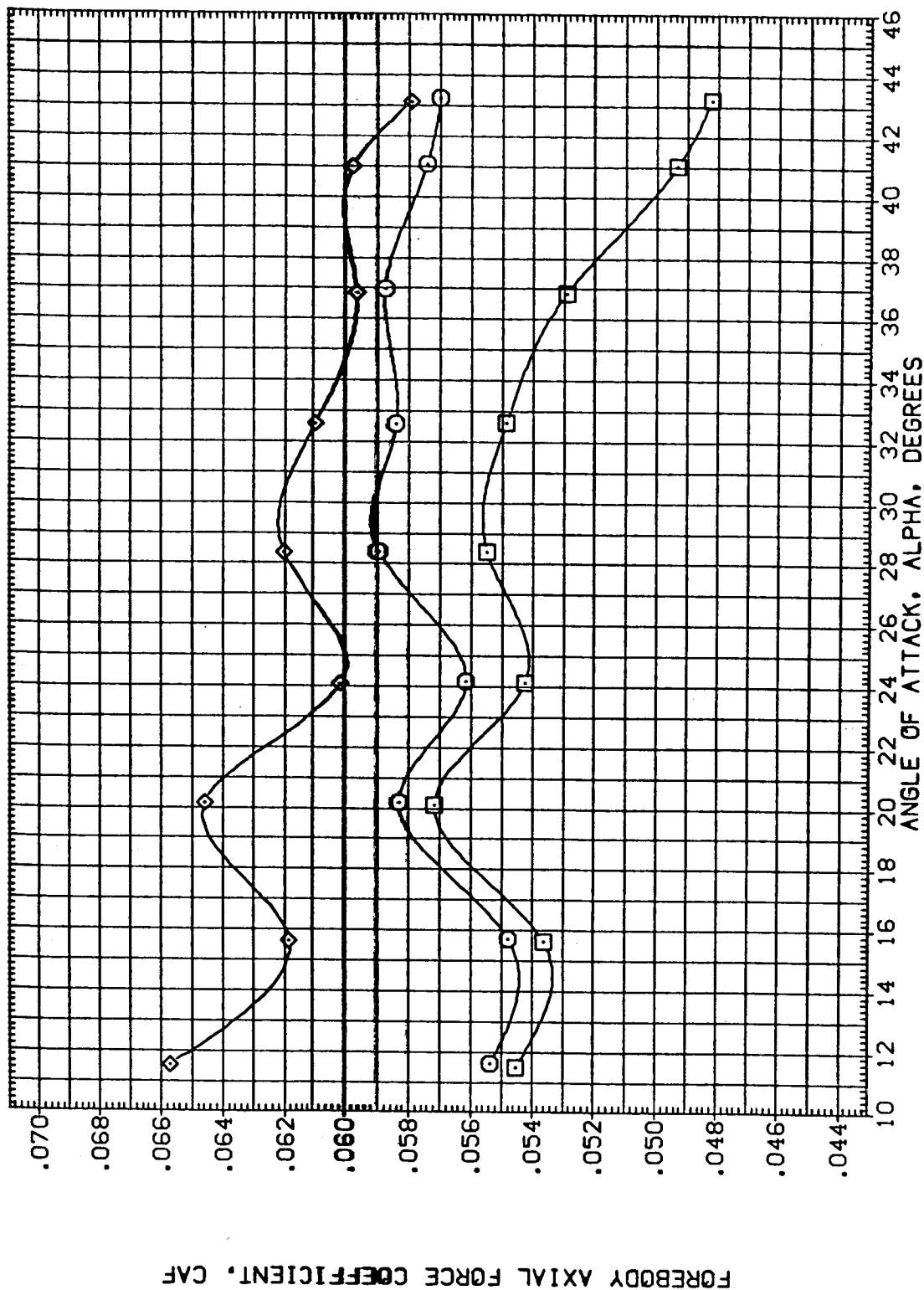


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
(EE0017)  
(EE0018)  
(EE0019)

# CONFIGURATION DESCRIPTION

AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)  
AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)  
AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
.000  
-10.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPDRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.  
YMRP .0000 IN.  
ZMRP 375.0000 IN.  
SCALE .0150

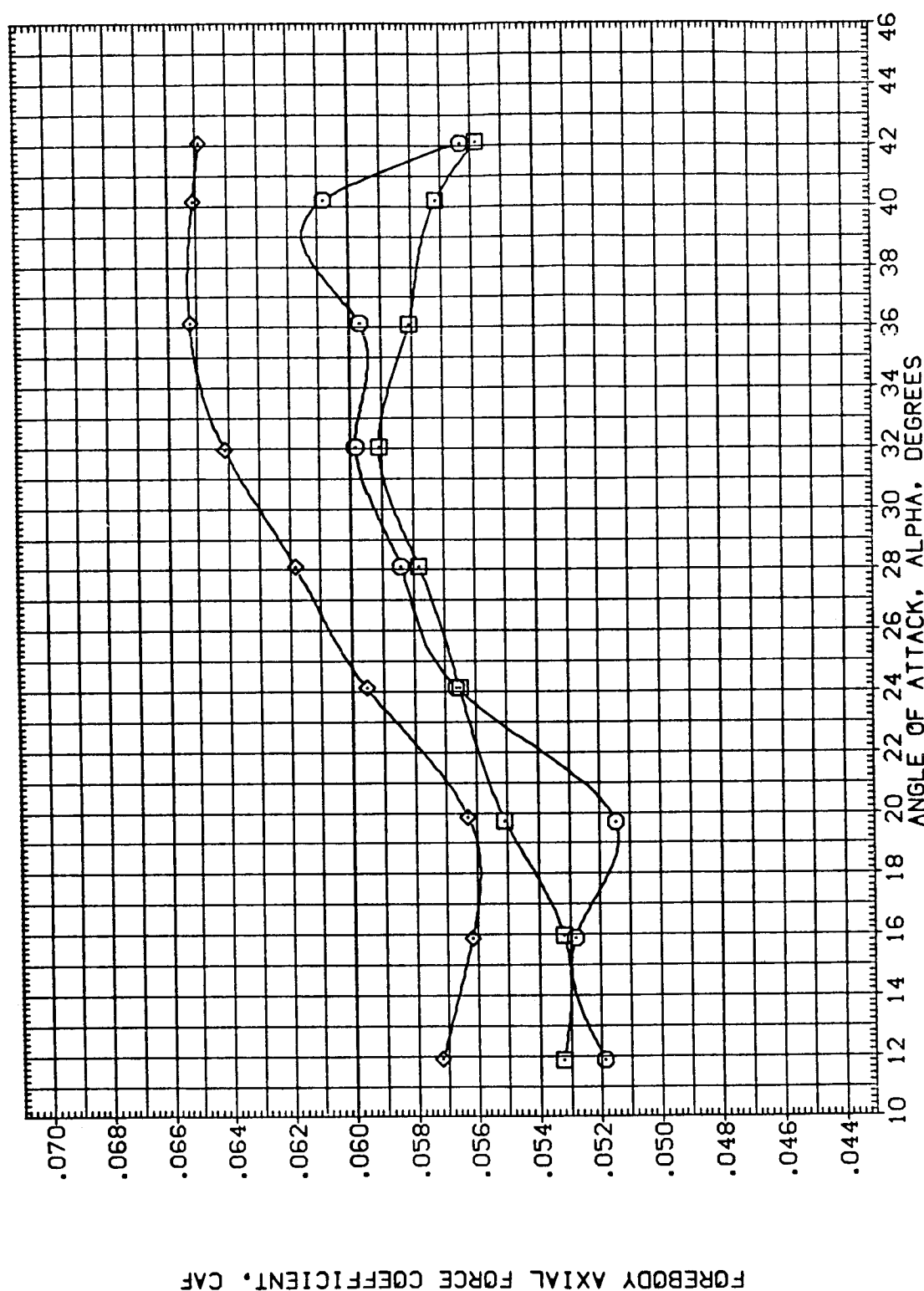


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0017)	AMES 3.5-190 0A98 (011-47-H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0018)	AMES 3.5-190 0A98 (011-47-H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-47-H14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

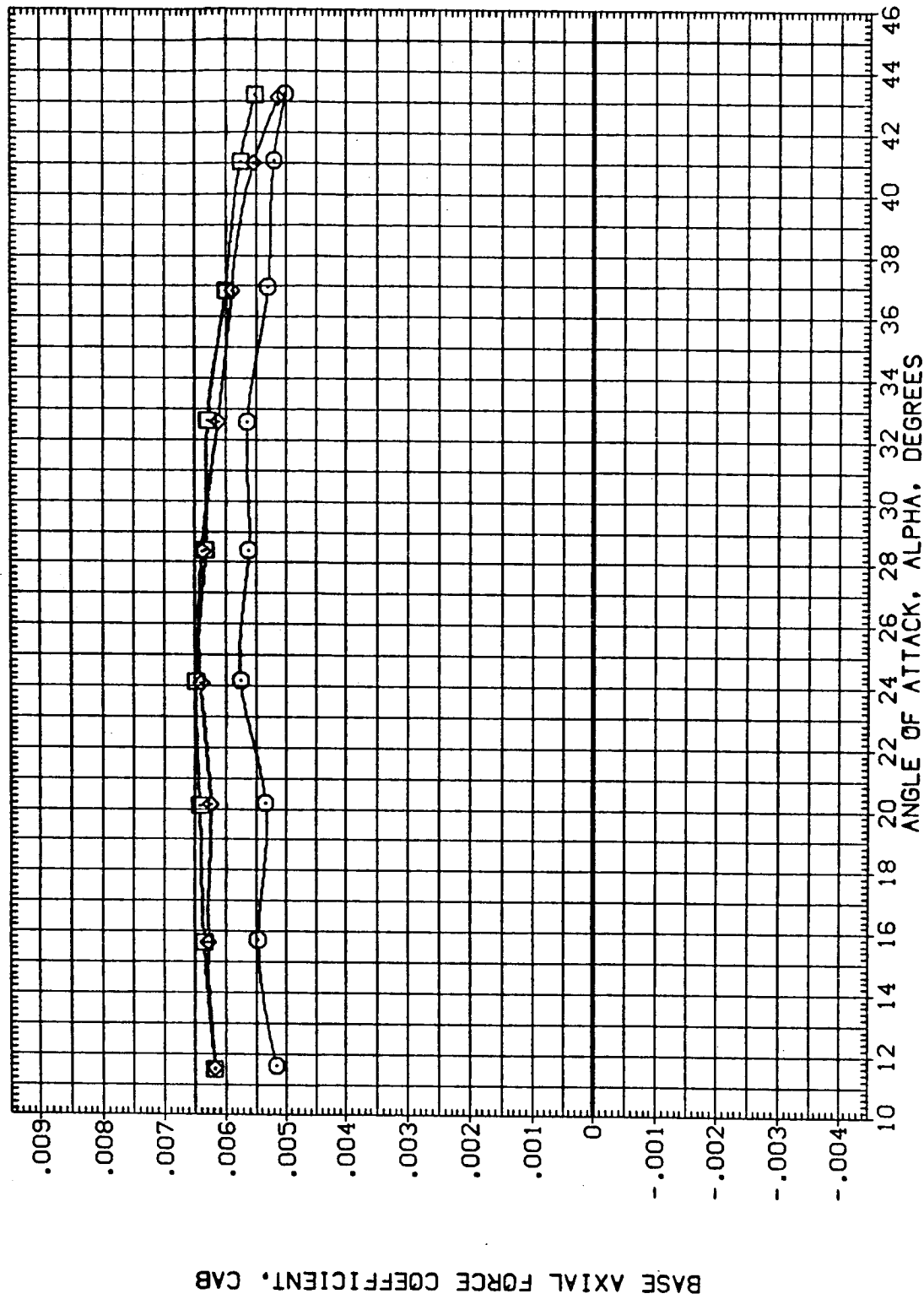


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    BETA    ELEVON    BOFLAP    SPOBRK    REFERENCE INFORMATION

(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF	2690.0000	50.FT.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF	474.8000	IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF	936.6000	IN.
						XMRP	1076.7000	IN.X0
						YMRP	.0000	IN.Y0
						ZMRP	375.0000	IN.Z0
						SCALE	.0150	

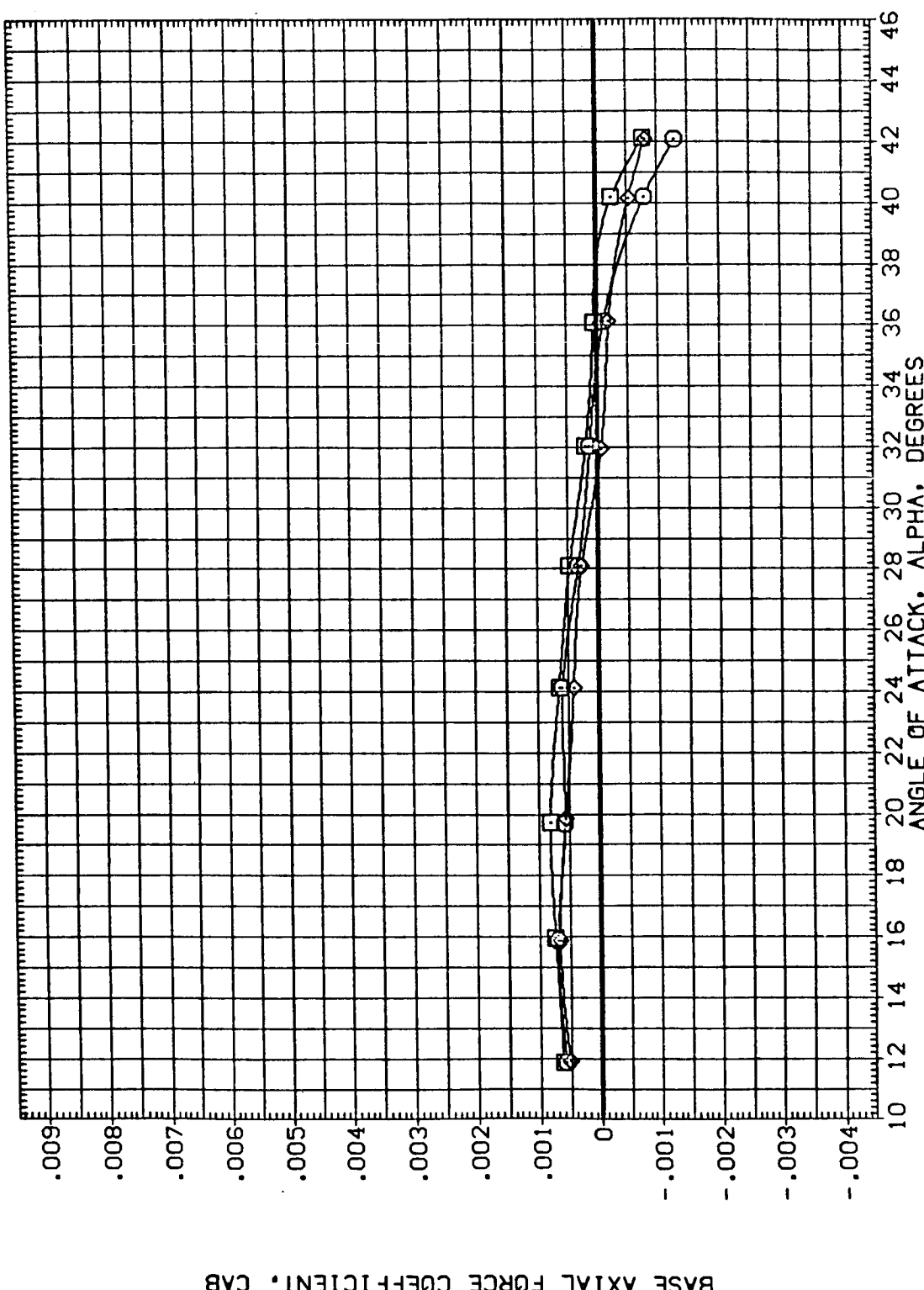


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(BEG0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEG0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BEG0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

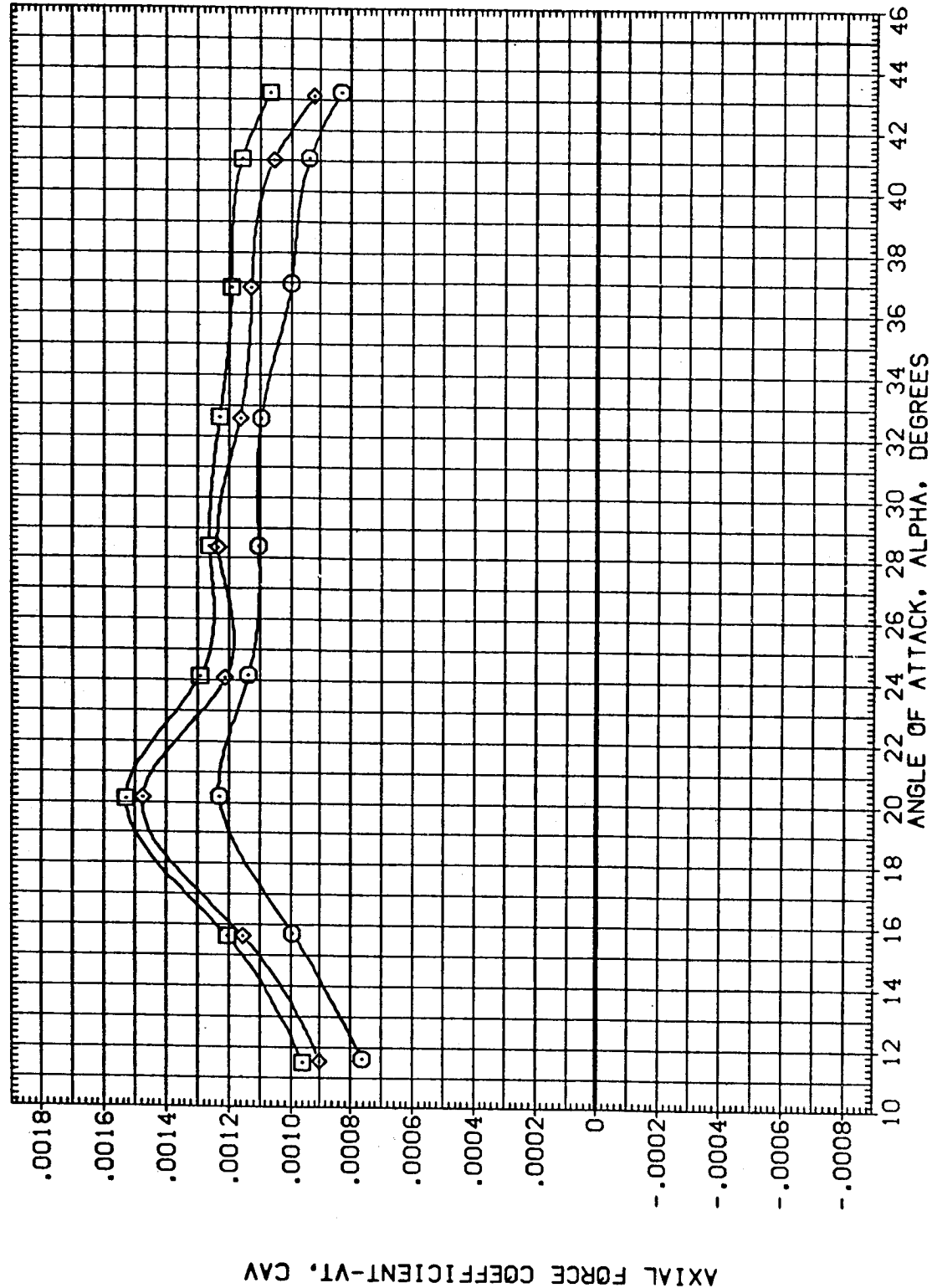


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

CA/MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0017)	AMES 3.5-190 GA98 (011-17+H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0018)	AMES 3.5-190 GA98 (011-17+H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BE0019)	AMES 3.5-190 GA98 (011-17+H14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6000 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

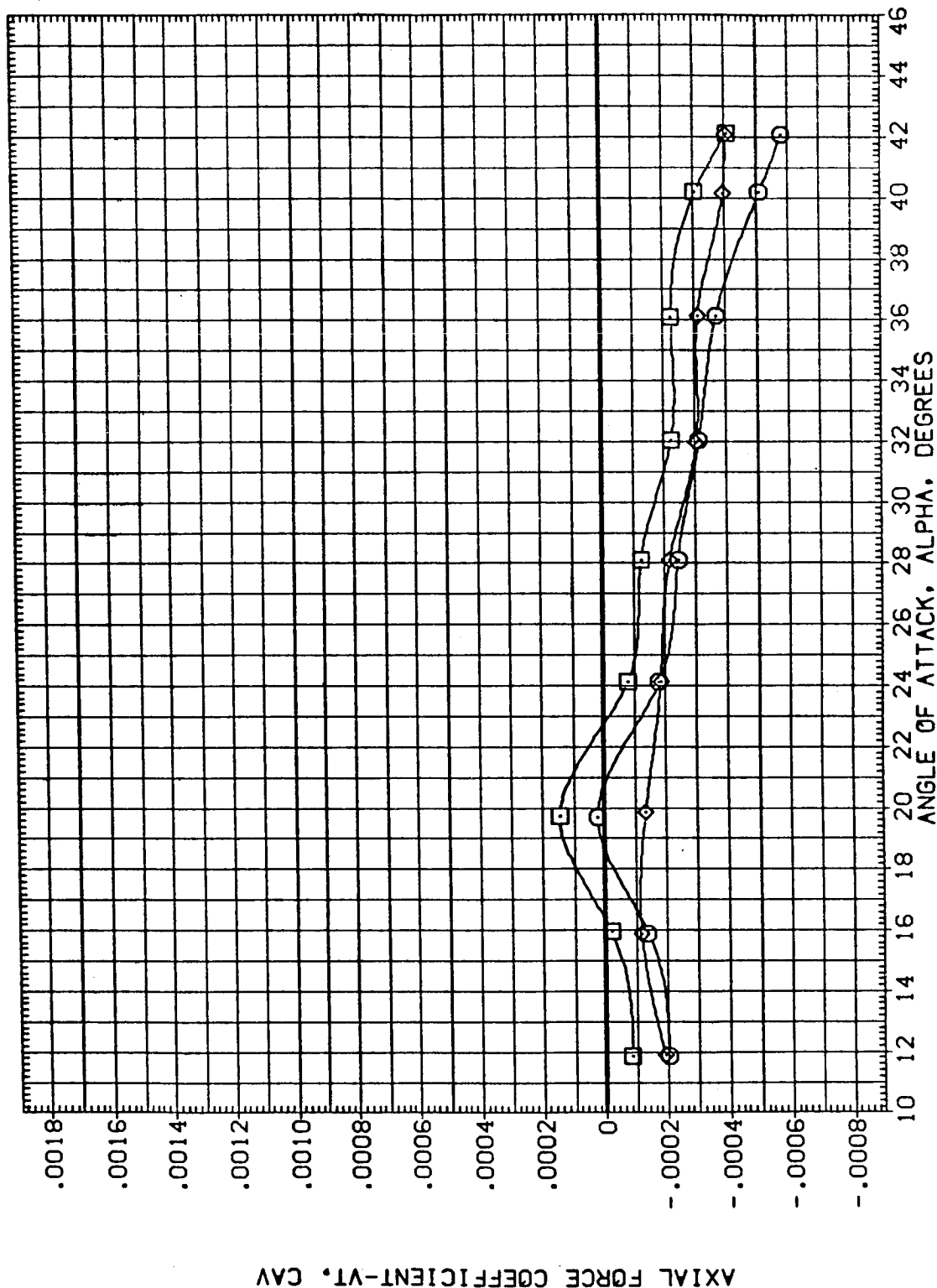


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BEO017)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEO018)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BEO019)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.5800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

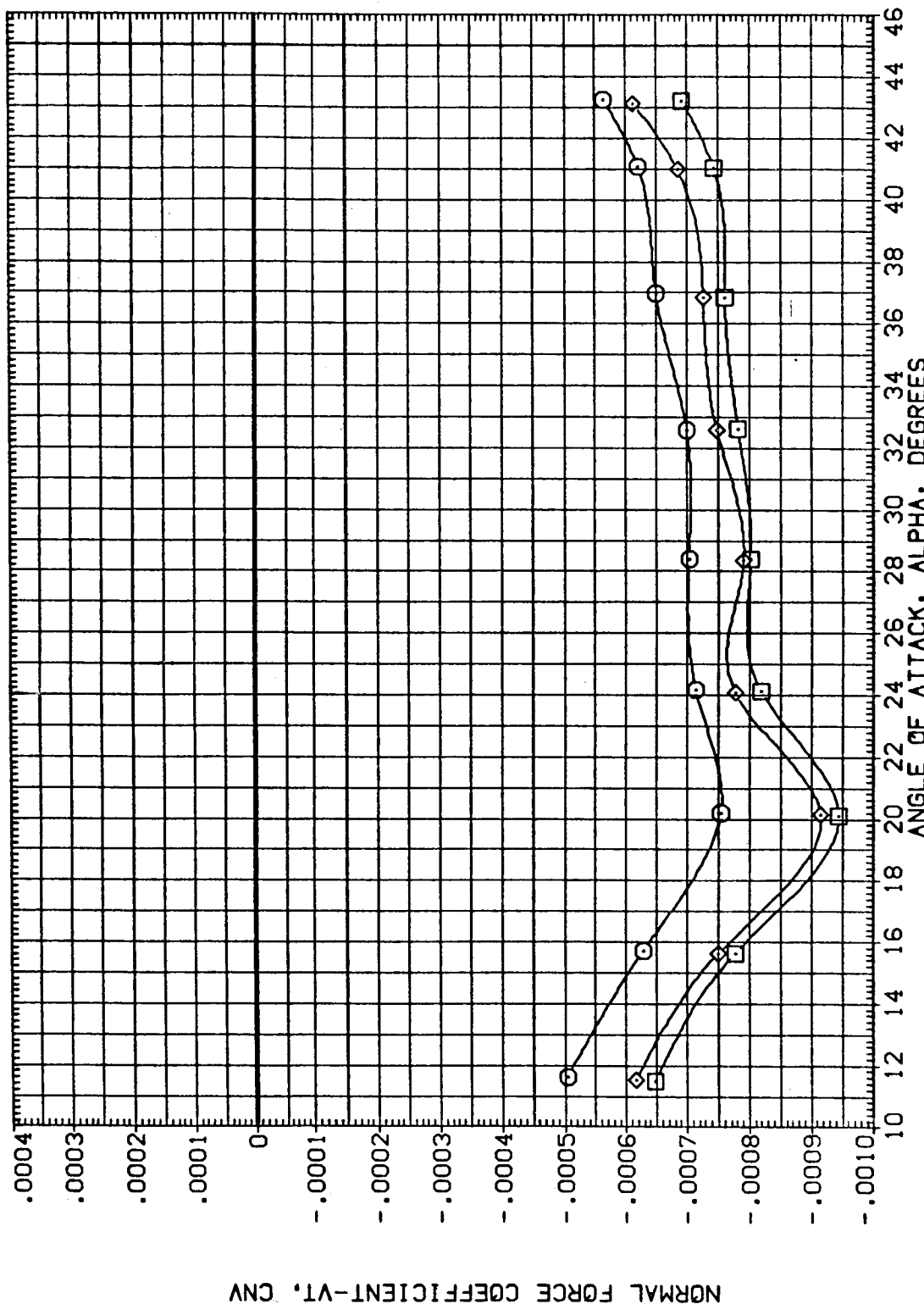


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

CAJ MACH = 5.25

DATA SET SYMBOL: (BEO017)  
(BEO018)  
(BEO019)

CONFIGURATION DESCRIPTION:  
AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)  
AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)  
AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)

BETA: .000  
.000  
.000

ELEVON: .000  
-10.000  
-40.000

BOFLAP: -11.700  
-11.700  
-11.700

SPDRK: 55.000  
55.000  
55.000

REFERENCE INFORMATION:  
SREF: 2690.0000 SQ.FT.  
LREF: 474.8000 IN.  
BREF: 936.6800 IN.  
XMRP: 1076.7000 IN.X0  
YMRP: 375.0000 IN.Y0  
ZMRP: .0150

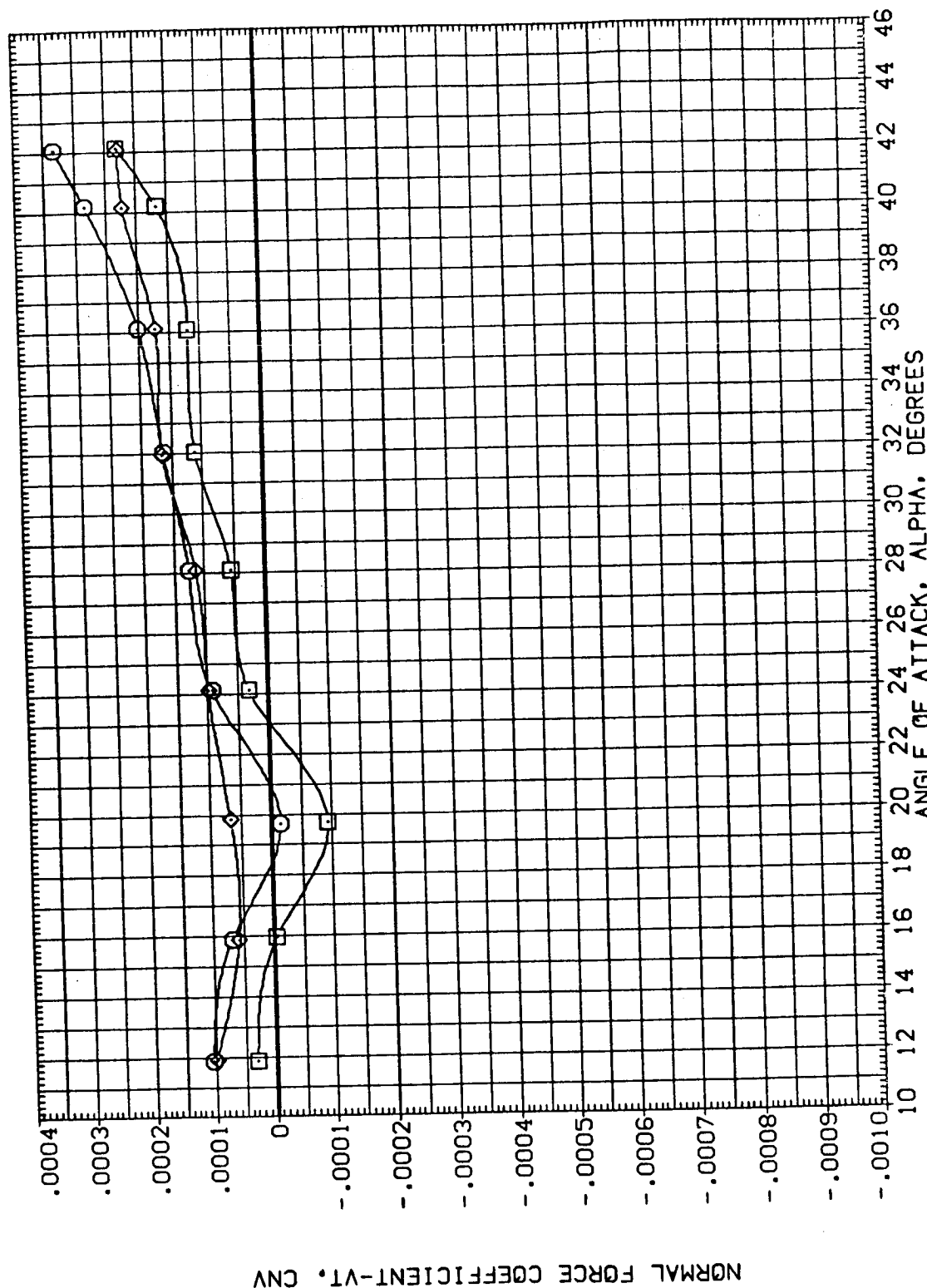


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION	
(BEQ017)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(BEQ018)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF	474.8000 IN.
(BEQ019)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF	936.6800 IN.
						XMRP	1076.7000 IN.X0
						YMRP	.0000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

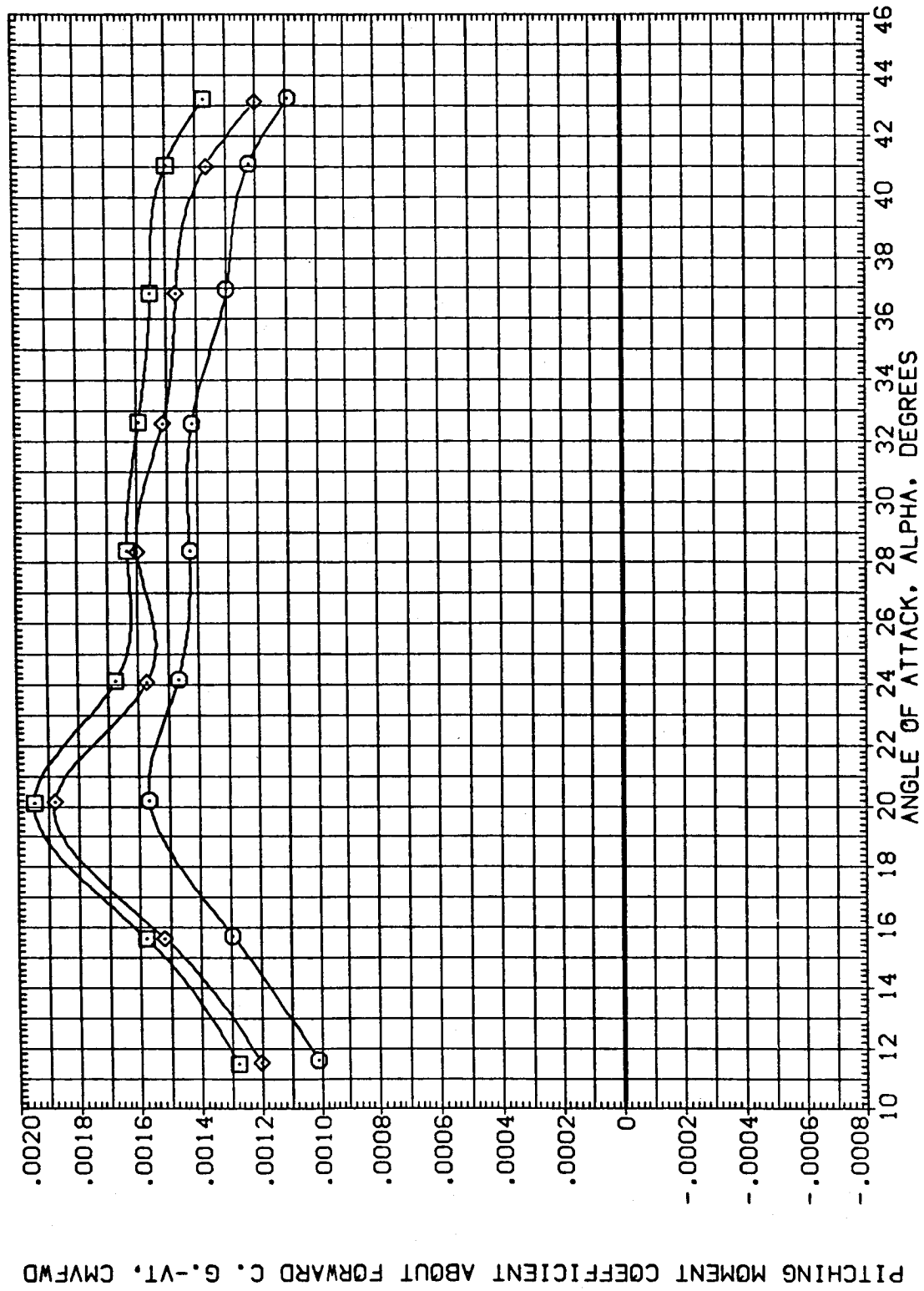


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRX	REFERENCE INFORMATION
(BE0017)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0018)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BE0019)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

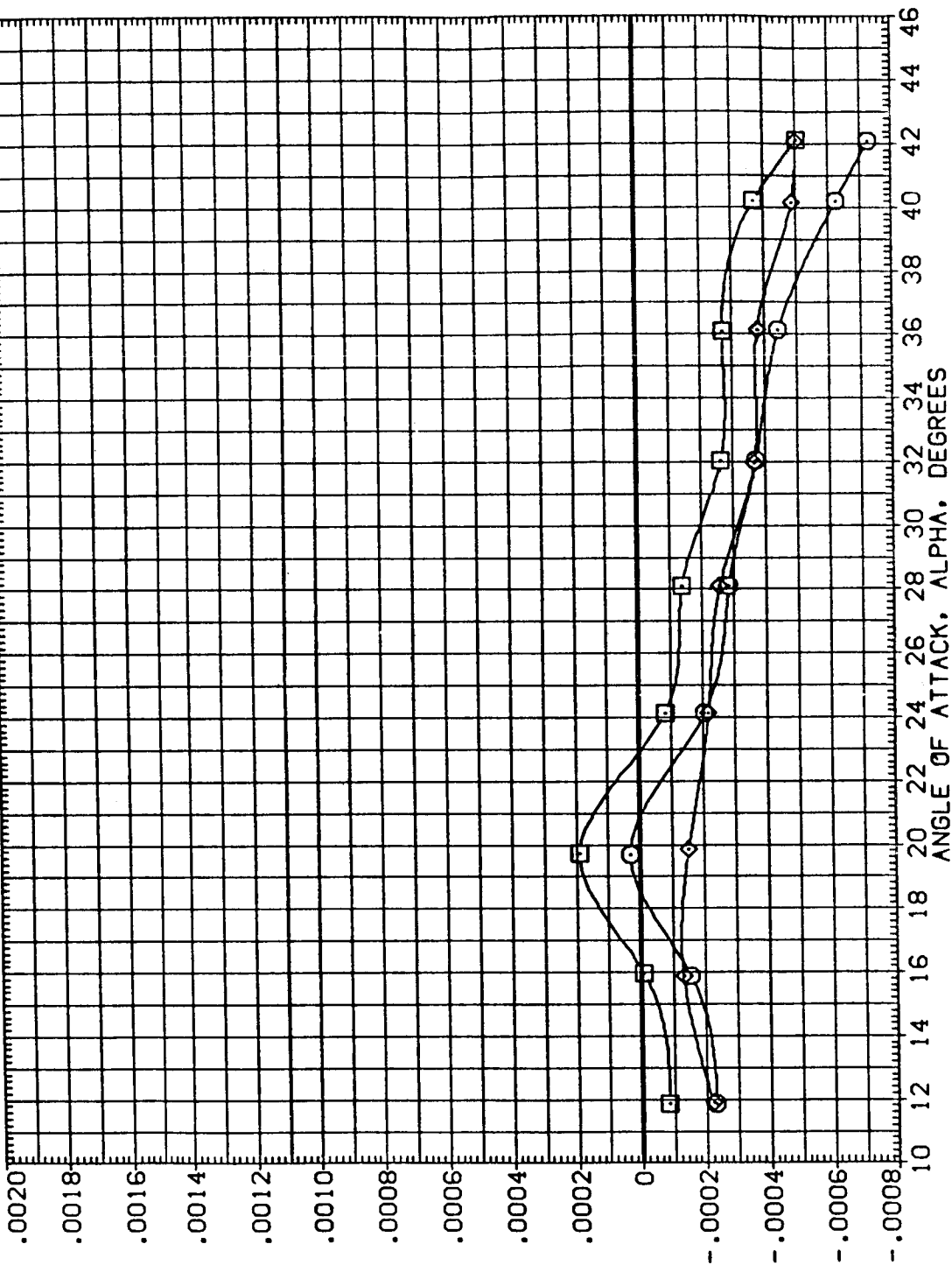


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(BEG017)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEG018)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BEG019)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

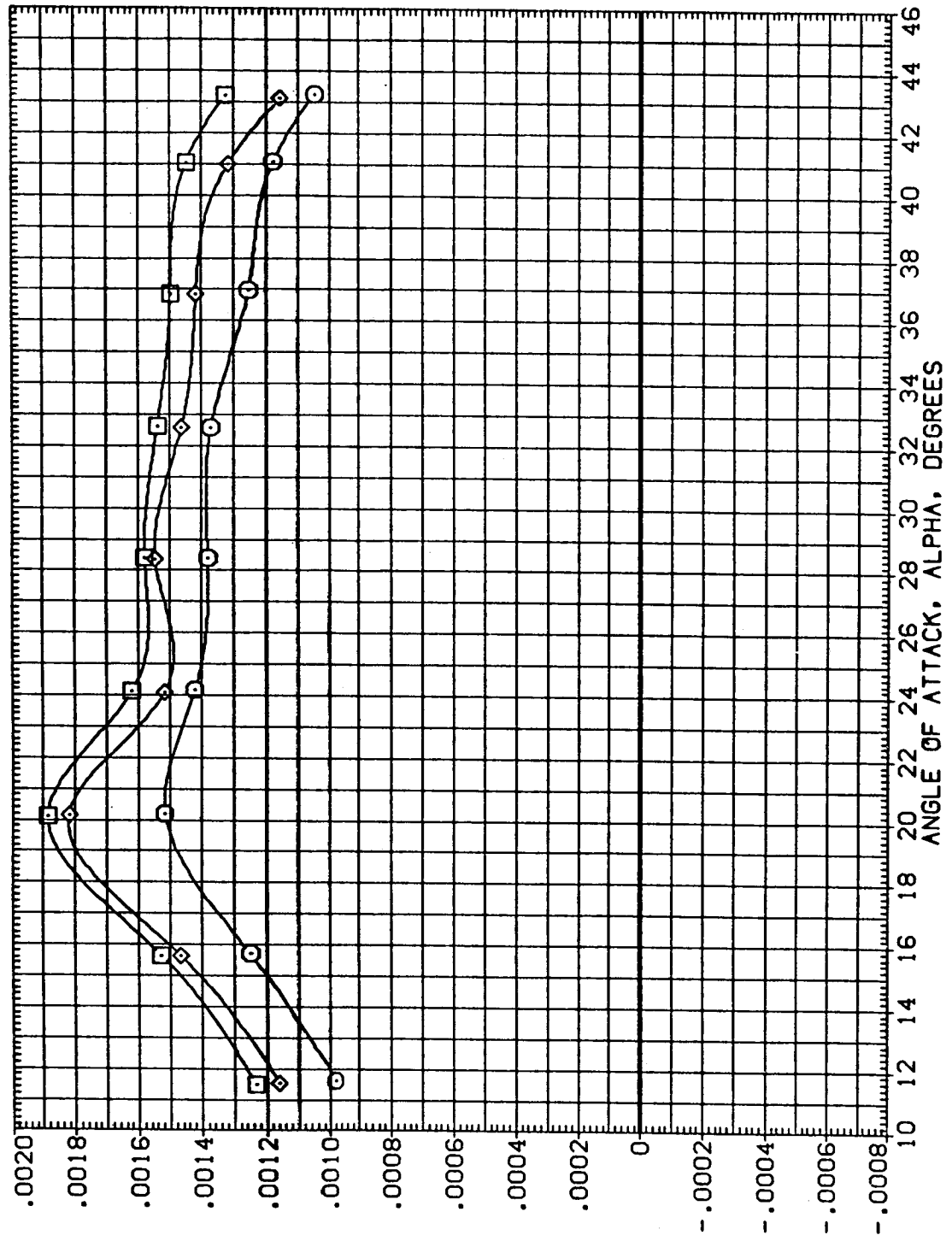


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BEC0017)	AMES 3.5-150 CAS8 (011-47-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2650.0000 SQ.FT.
(BEC0018)	AMES 3.5-150 CAS8 (011-47-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BEC0019)	AMES 3.5-150 CAS8 (011-47-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

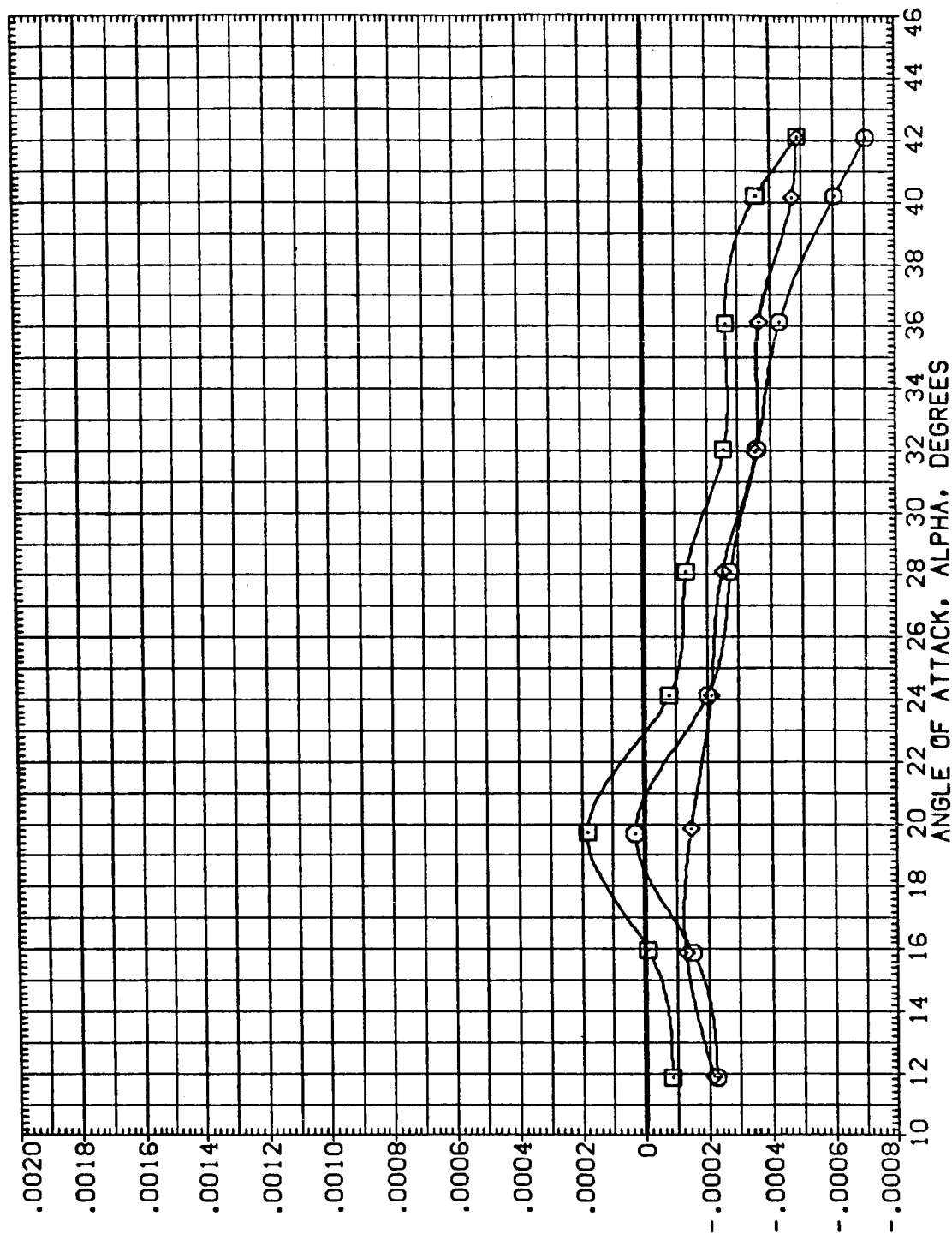


FIG. 4 LONGITUDINAL ELEVON EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(B)MACH = 10.27

DATA SET SYMBOL  
(JE0001)  
(CE0004)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 D498 (011-M7+M14)  
AMES 3.5-190 D498 (011-M7+M14)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPOBRK  
55.000  
85.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN. X0  
YMRP .0000 IN. Y0  
ZMRP 375.0000 IN. Z0  
SCALE .0150

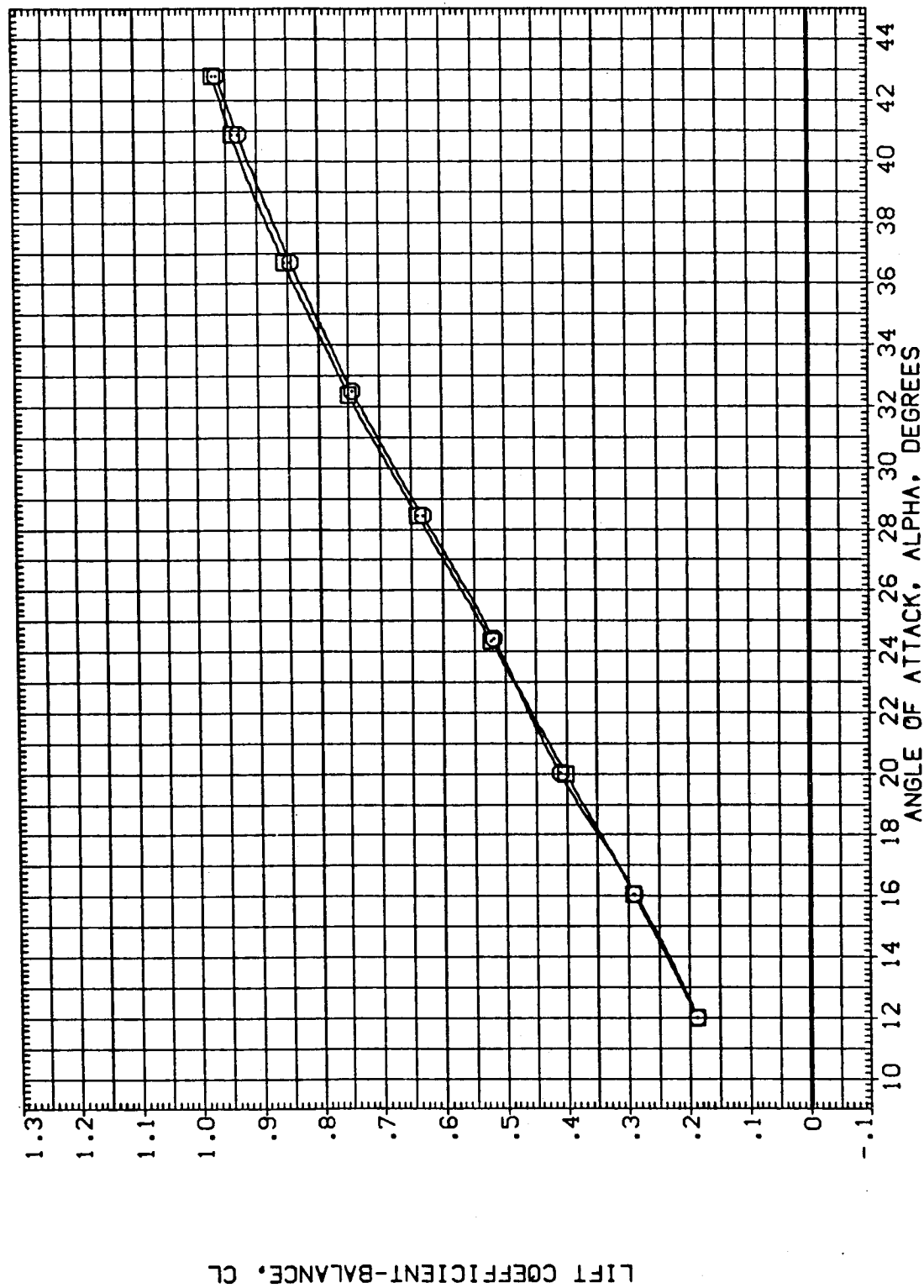


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (JE0001) (CE0004)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-M7-M14)  
 AMES 3.5-190 0A98 (011-M7-M14)

BETA .000  
 ELEVON .000  
 BOFLAP -11.700  
 SPOBRK 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

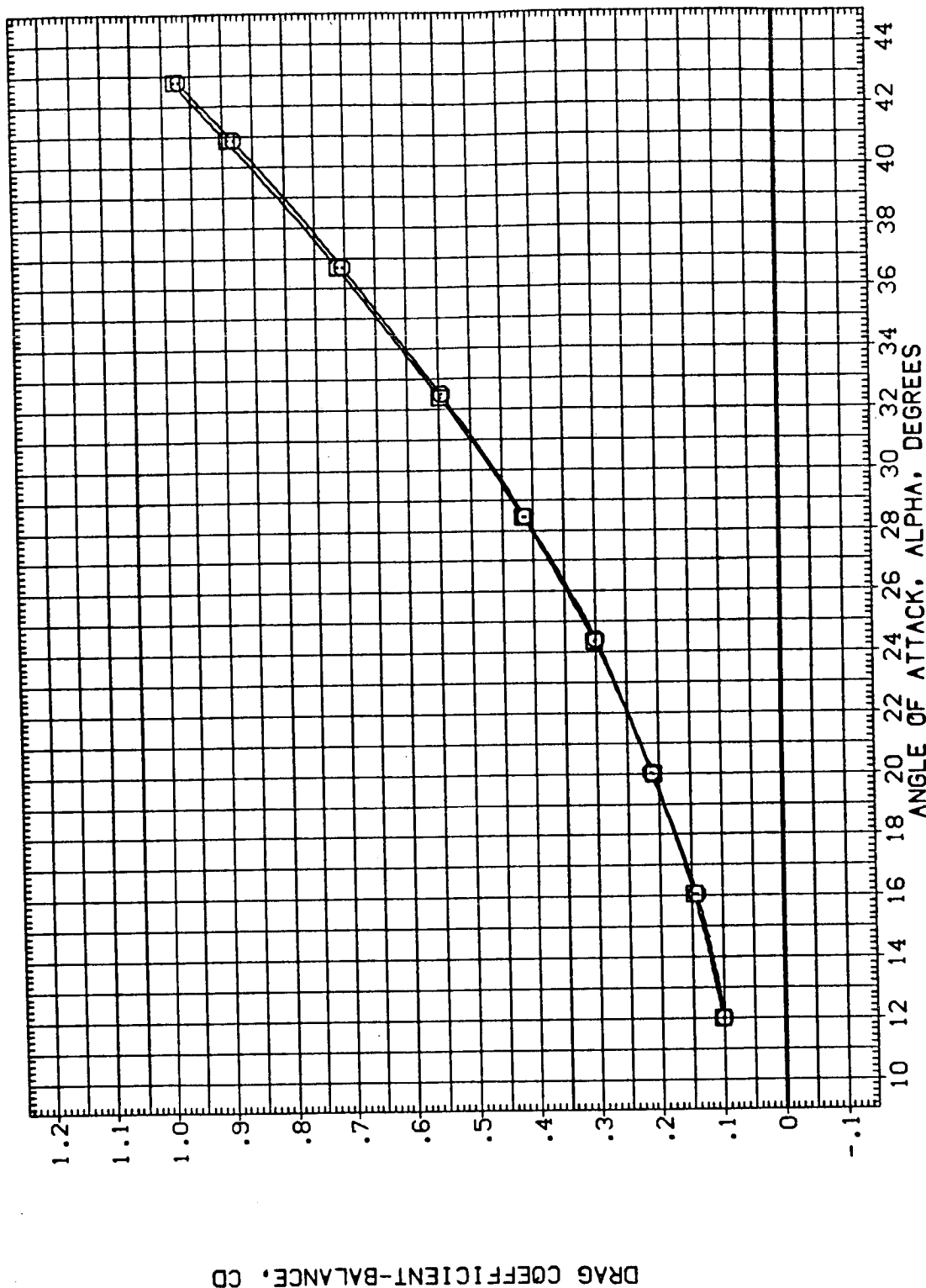


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(JE0001)	AMES 3.5-190 OA98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0004)	AMES 3.5-190 OA98 (011-M7-M14)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

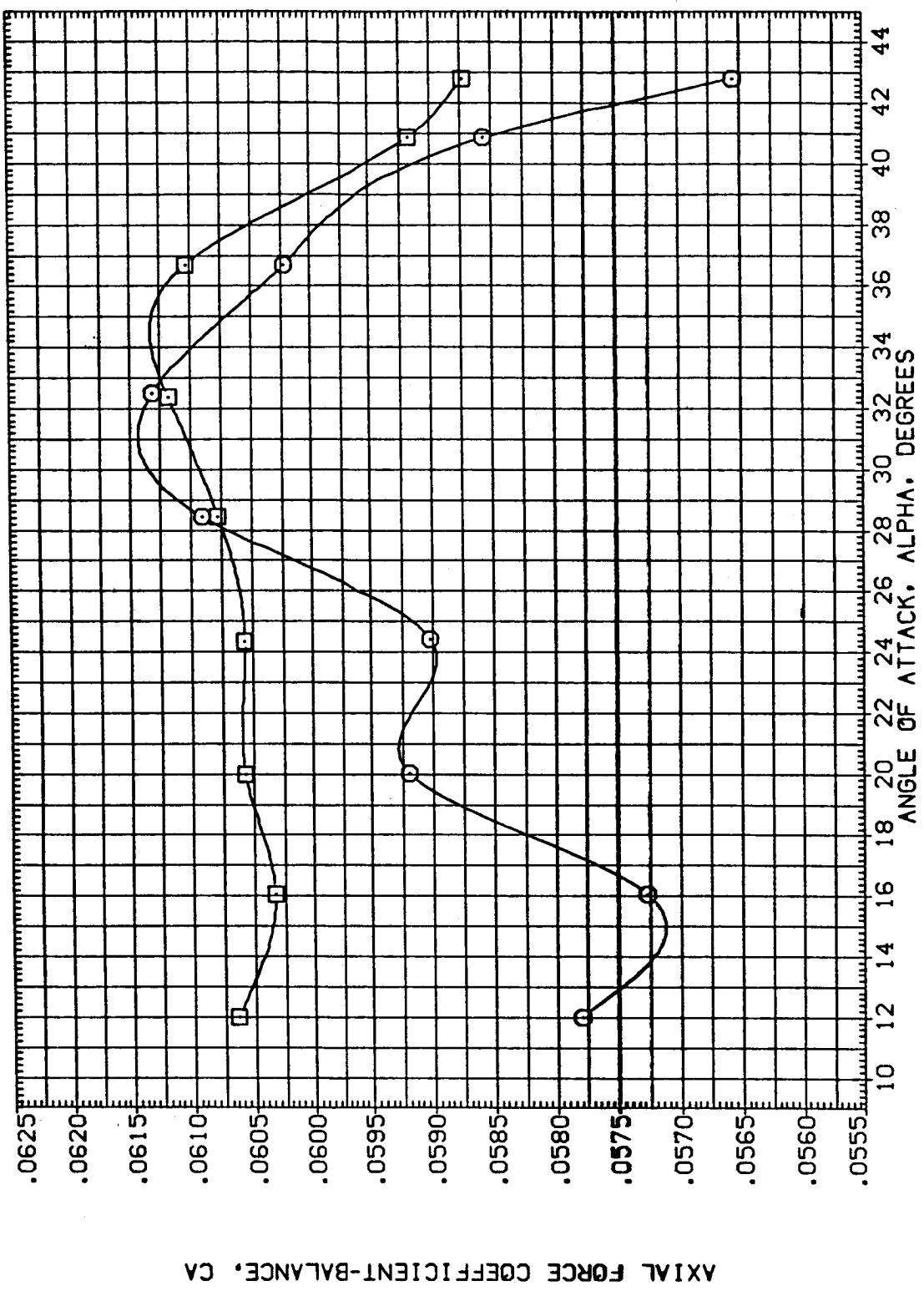




FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (JEG0001)     AVES 3.5-190 0A98 (011-47-M14)  
 (CE0004)     AVES 3.5-190 0A98 (011-47-M14)

BETA    ELEVON    BOFLAP    SPOBRK    REFERENCE INFORMATION  
 .000    .000    -11.700    55.000    SREF    2690.0000    50.FT.  
 .000    .000    -11.700    85.000    LREF    474.8000    IN.  
 .000    .000    .000    .000    BRFP    936.6800    IN.  
 .000    .000    .000    .000    XMRP    1076.7000    IN.X0  
 .000    .000    .000    .000    YMRP    .0000    IN.Y0  
 .000    .000    .000    .000    ZMRP    375.0000    IN.Z0  
 .000    .000    .000    .000    SCALE    .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWO

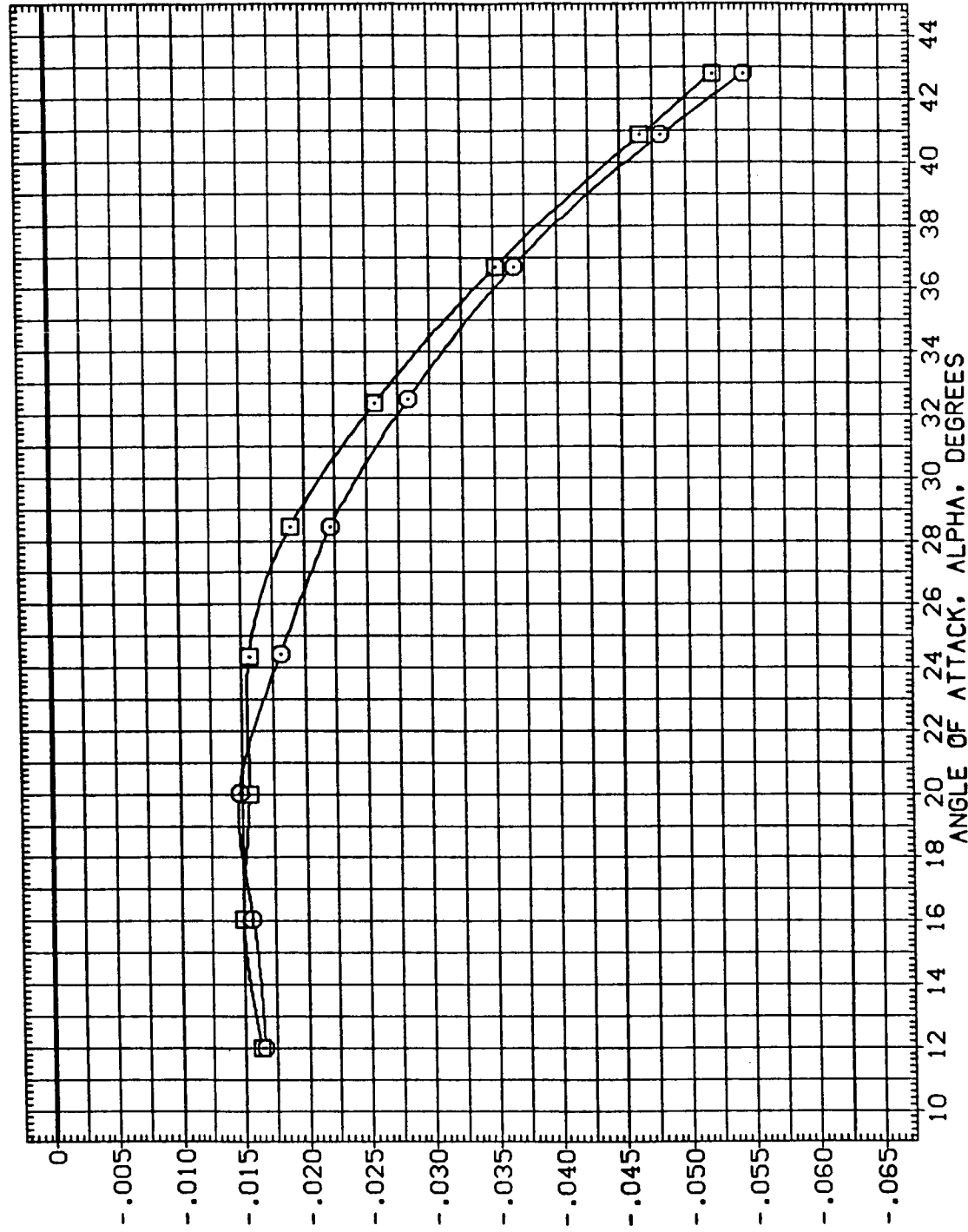


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(JE0001)	AVES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0004)	AVES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

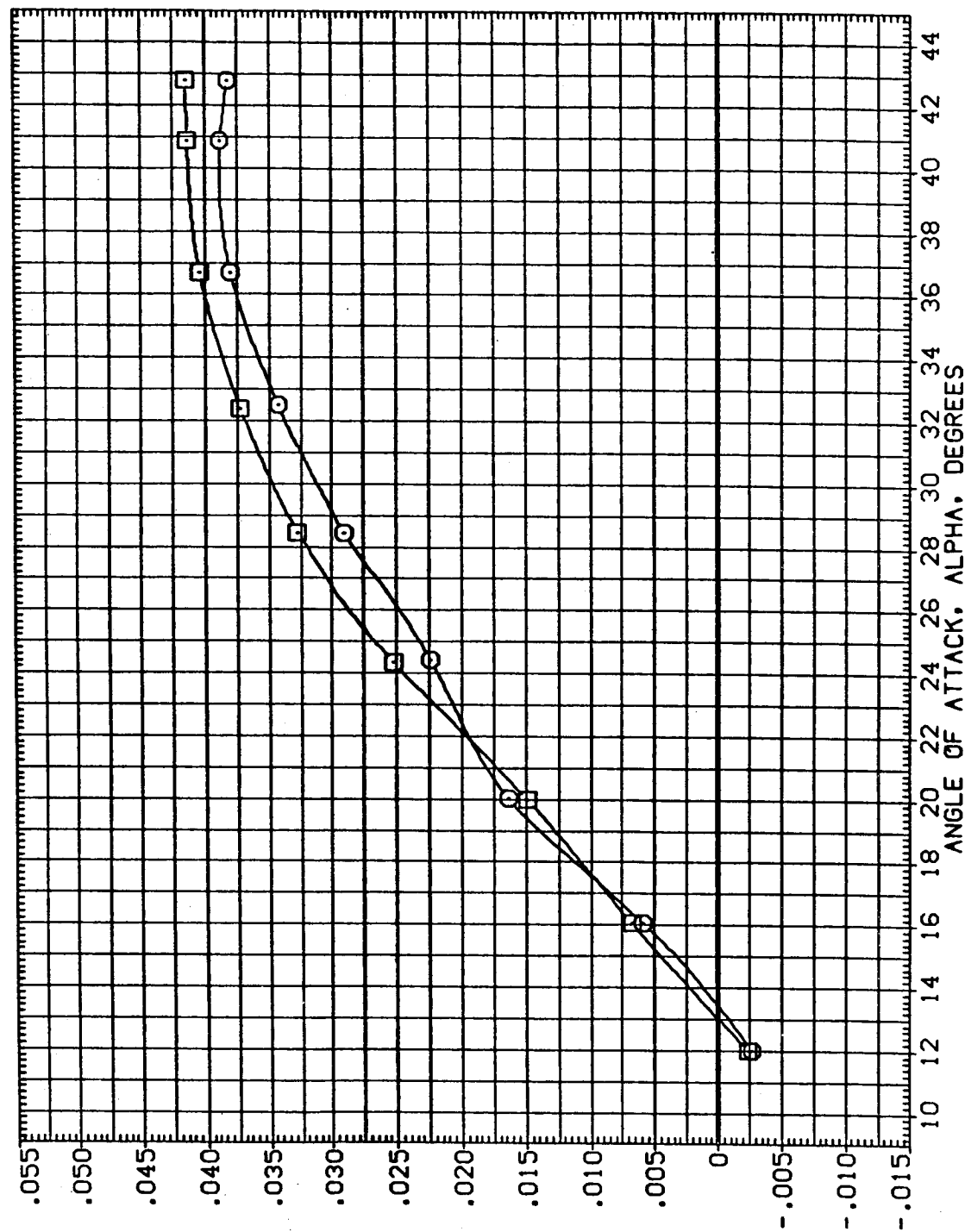
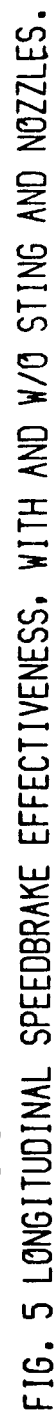


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

BETA		ELEVON	BOFLAP	SPODBRK	SREF	2690.0000	50.FT.
.000	.000	-11.700	55.000	LREF	474.8000	IN.	
.000	.000	-11.700	85.000	BREF	936.6800	IN.	
				XMRP	1076.7000	IN.	XG
				YMRP	.0000	IN.	YG
				ZMRP	375.0000	IN.	ZG
				SCALE	.0150		



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DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (JEC001)    AMES 3.5-190 0A98 (011-17+M14)  
 (CE0004)    AMES 3.5-190 0A98 (011-17+M14)

BETA    ELEVON    BDFLAP    SPOBRK  
 .000    .000    -11.700    55.000  
 .000    .000    -11.700    85.000

REFERENCE INFORMATION  
 SREF    2690.0000    SQ.FT.  
 LREF    474.8000    IN.  
 BREF    936.8800    IN.  
 XMRP    1076.7000    IN.X0  
 YMRP    .0000    IN.Y0  
 ZMRP    375.0000    IN.Z0  
 SCALE    .0150

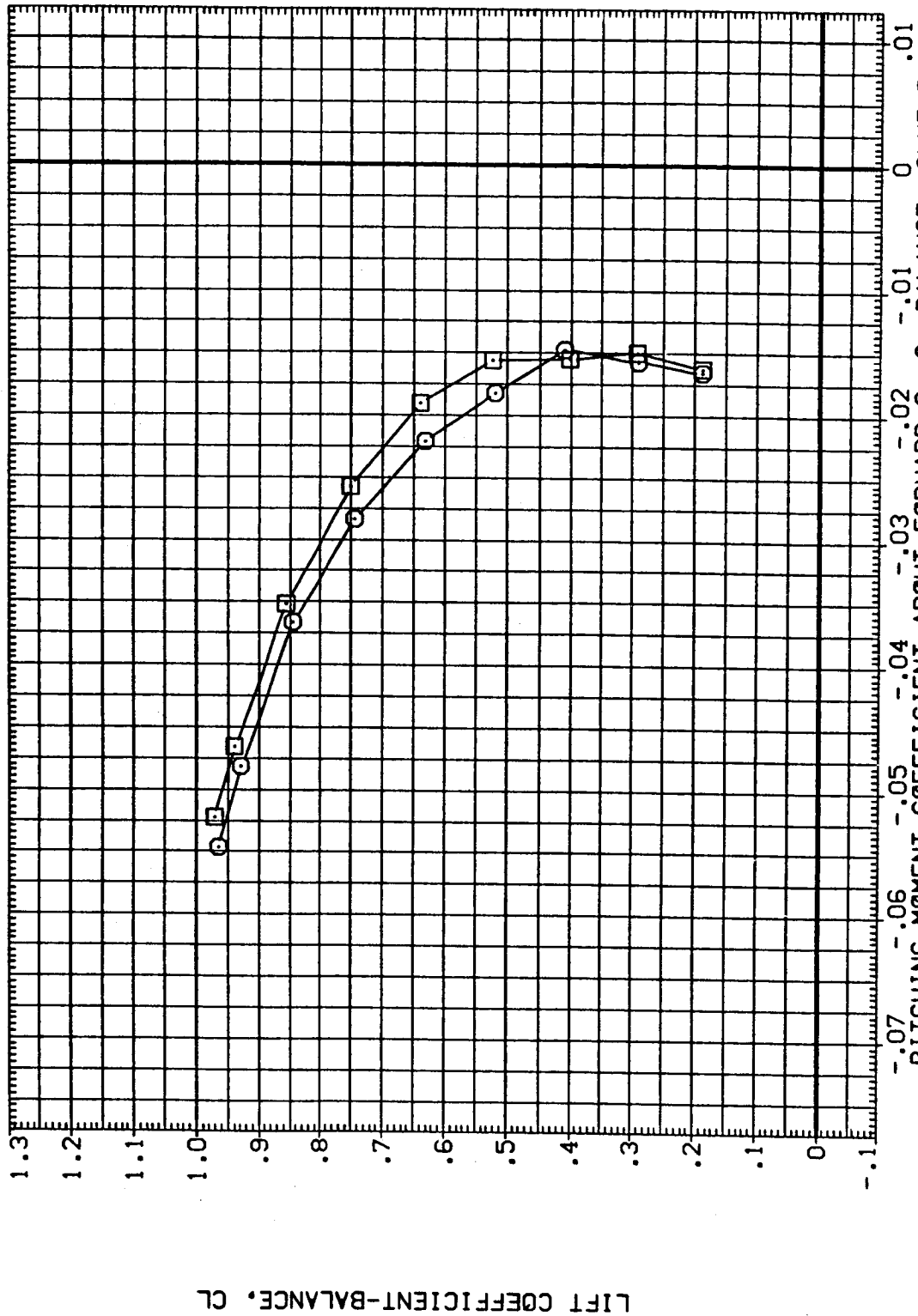


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (JEG0001) AMES 3.5-190 OAS8 (011-47-M14)  
 (CEG0004) AMES 3.5-190 OAS8 (011-47-M14)

BETA ELEVON BDFLAP SPOBRK REFERENCE INFORMATION  
 .000 .000 .000 2690.0000 SQ.FT.  
 .000 .000 -11.700 474.8000 IN.  
 .000 .000 -11.700 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

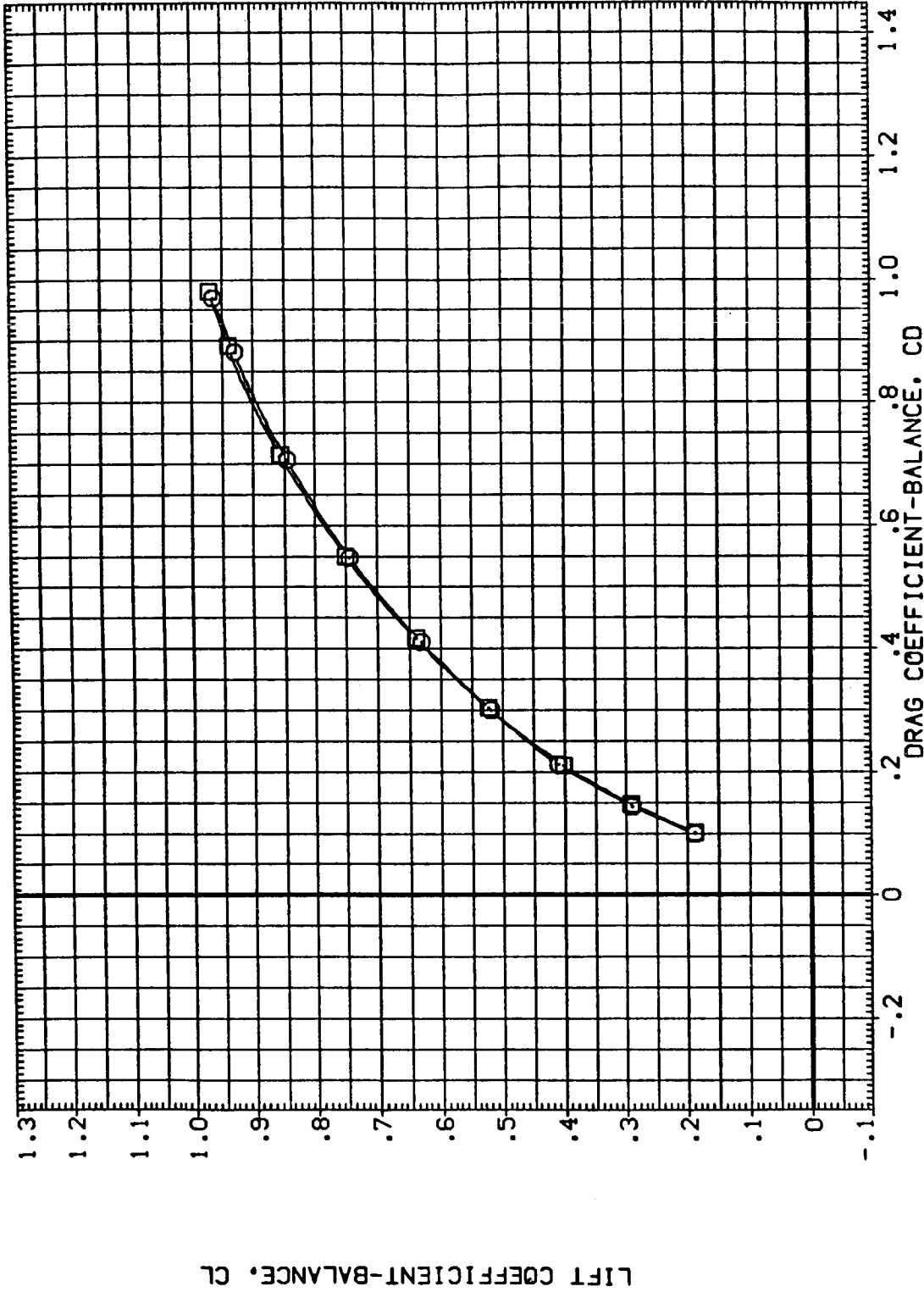


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(KEQ001)	AMES 3.5-190 0A98 (011-47-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EEQ004)	AMES 3.5-190 0A98 (011-47-M14)	.000	.000	-11.700	65.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XG
						YMRP .0000 IN.YG
						ZMRP .0000 IN.ZG
						SCALE .0150

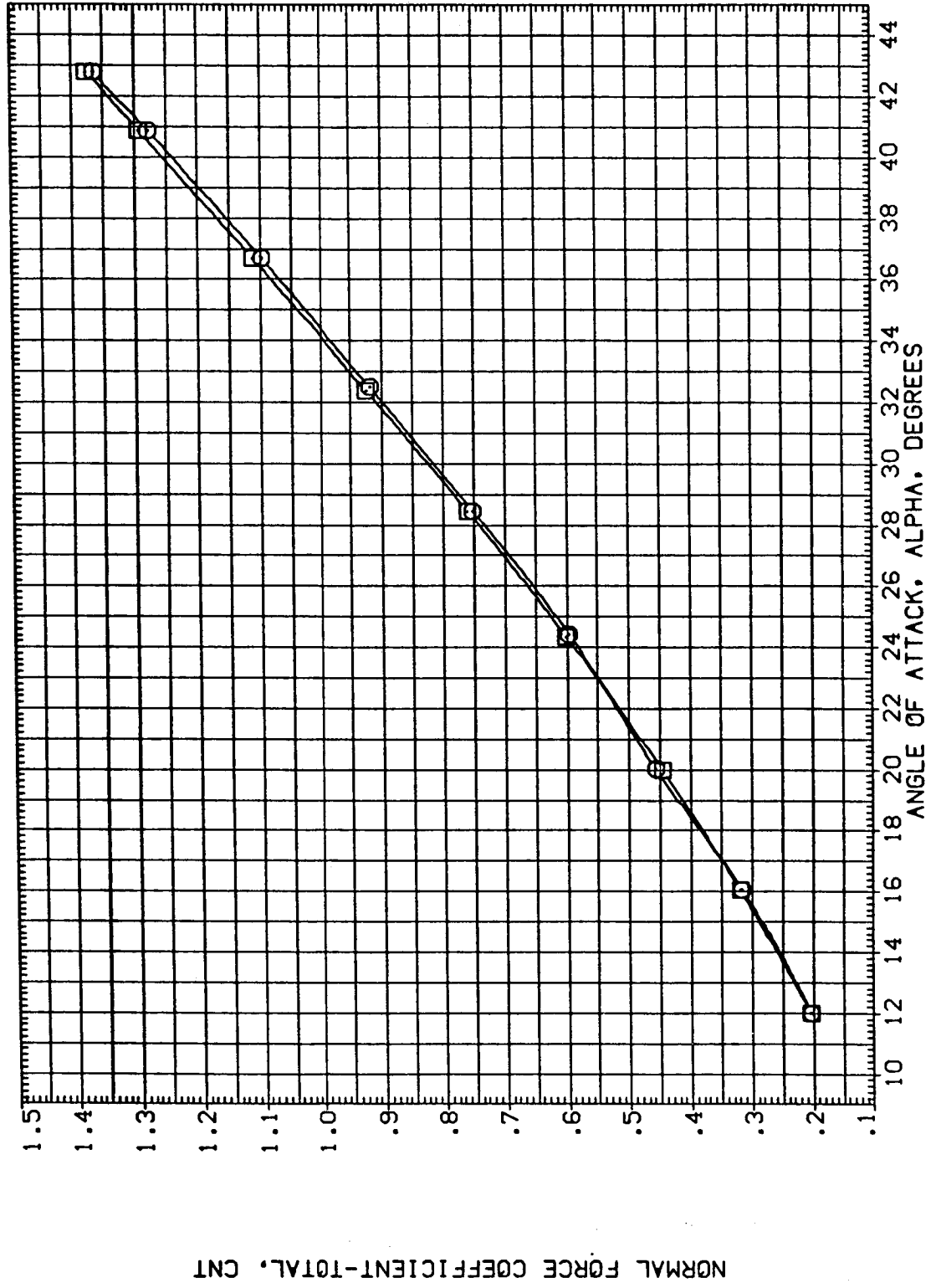


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL: (KE0001) (EE0004)

CONFIGURATION DESCRIPTION: AMES 3.5-190 0A98 (011-M7-M14) AMES 3.5-190 0A98 (011-M7-M14)

BETA: .000 .000

ELEVATION: .000 .000

BOFLAP: -11.700 -11.700

SPOBRK: 55.000 55.000

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP 375.0000 IN. ZMRP 375.0000 IN. SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

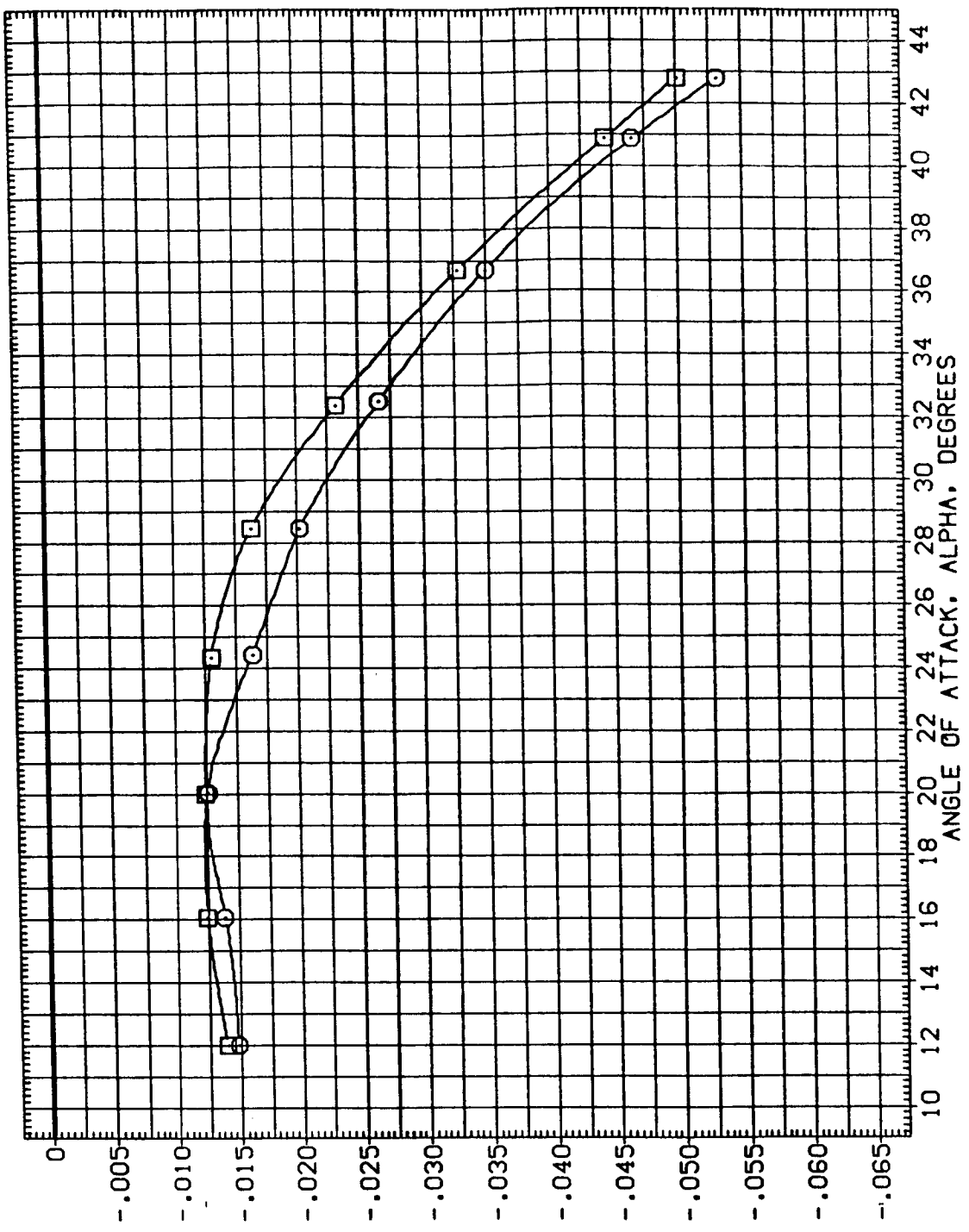


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (KE0001)    AMES 3.5-150 0A98 (011-17+114)  
 (EE0004)    AMES 3.5-150 0A98 (011-17+114)

BETA    ELEVON    BOFLAP    SPOBRK  
 .000    .000    -11.700    55.000  
 .000    .000    -11.700    85.000

REFERENCE INFORMATION  
 SREF    2690.0000    50.FT.  
 LREF    474.8000    IN.  
 BREF    936.6800    IN.  
 XMRP    1076.7000    IN.X0  
 YMRP    .0000    IN.Y0  
 ZMRP    375.0000    IN.Z0  
 SCALE    .0150

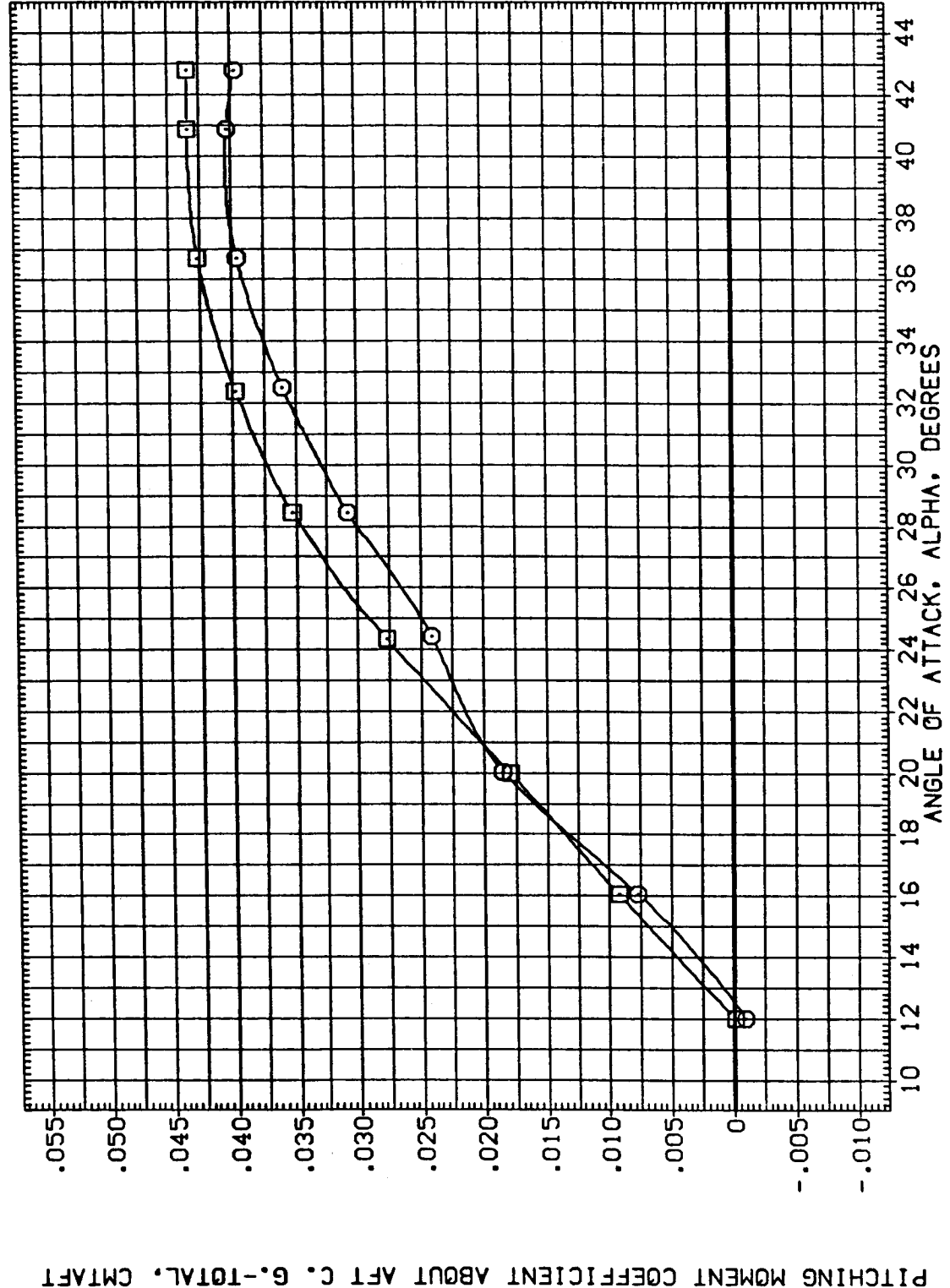


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.  
 (A)MACH = 5.25    PAGE 137

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(KE0001)    AMES 3.5-190 0A98 (011-47+M14)

(EE0004)    AMES 3.5-190 0A98 (011-47+M14)

BETA    ELEVON    BOFLAP    SPOBRK

.000    .000    -11.700    55.000

.000    .000    -11.700    85.000

REFERENCE INFORMATION

SREF    2690.0000    SQ.FT.

LREF    474.8000    IN.

BREF    936.6800    IN.

XMRP    1076.7000    IN.XD

YMRP    .0000    IN.YD

ZMRP    375.0000    IN.ZD

SCALE    .0150

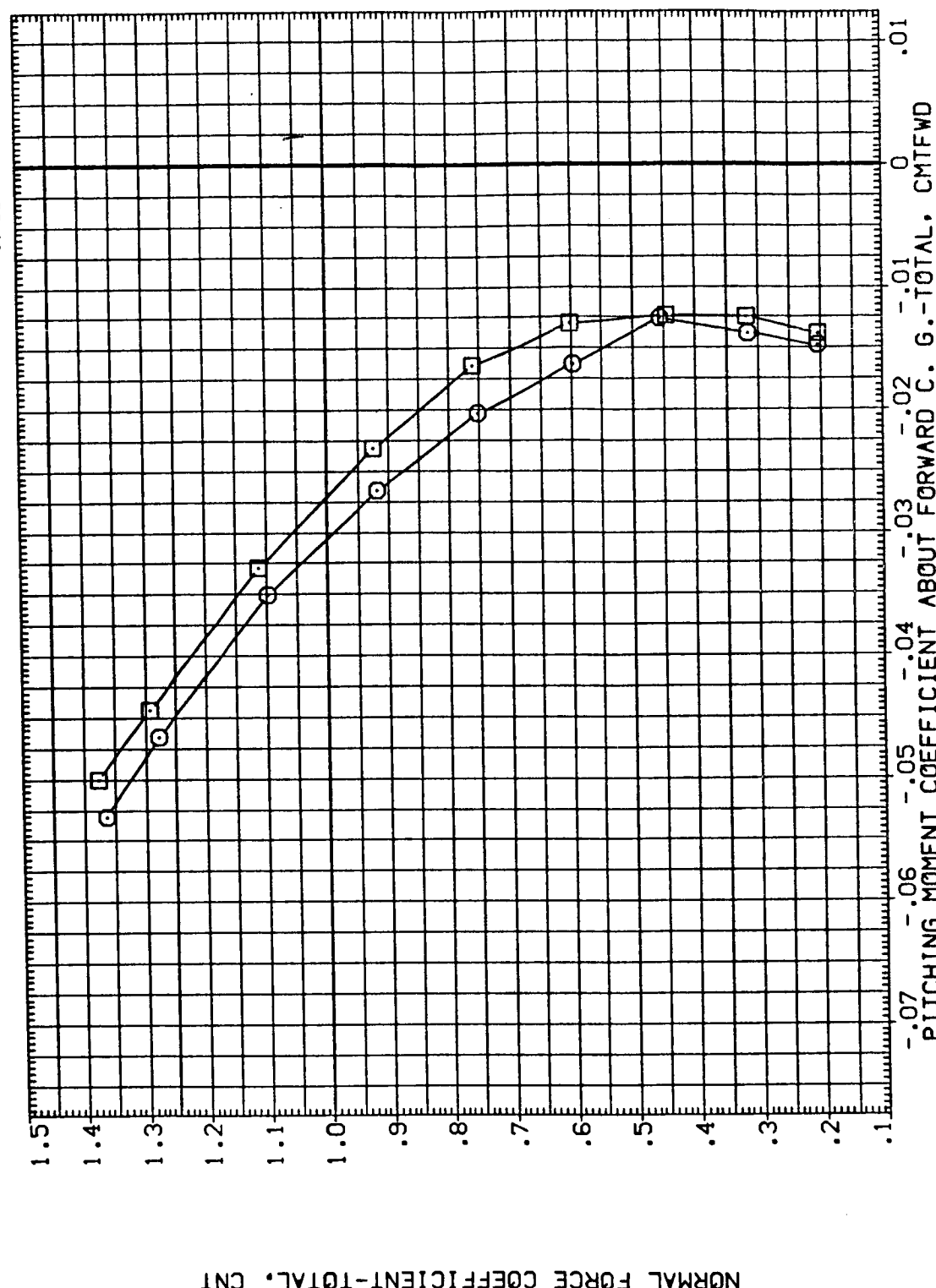




FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

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DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (ME0001)  AMES 3.5-190 DA98 (011-M7+M14)  
 (EE0004)  AMES 3.5-190 DA98 (011-M7+M14)

BETA ELEVON BOFLAP SPDBRK  
 .000 .000 -11.700 55.000  
 .000 .000 -11.700 85.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.8800 IN.  
 XMRP 1076.7000 IN. X0  
 YMRP .0000 IN. Y0  
 ZMRP 375.0000 IN. Z0  
 SCALE .0150

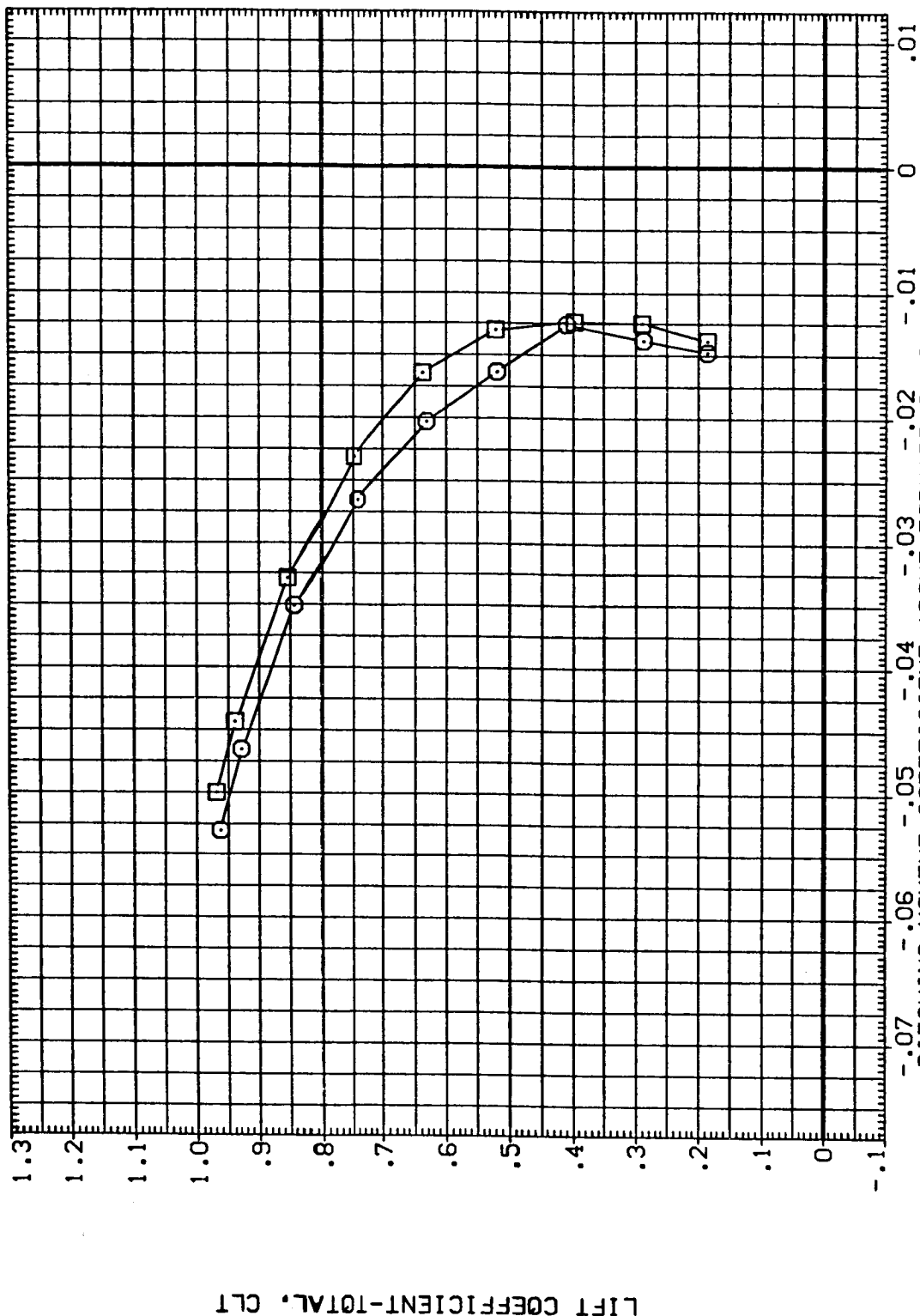


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL: (KE0001) (EE0004)

CONFIGURATION DESCRIPTION: AVES 3.5-190 0A98 (011-M7+M14) AVES 3.5-190 0A98 (011-M7+M14)

BETA: .000 .000

ELEVON: .000 .000

BDFLAP: -11.700 -11.700

SPOBRK: 55.000 85.000

REFERENCE INFORMATION: SREF 2690.0000 50.000 S0.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP .0000 IN. ZMRP 375.0000 IN. YD IN. ZD IN. SCALE .0150

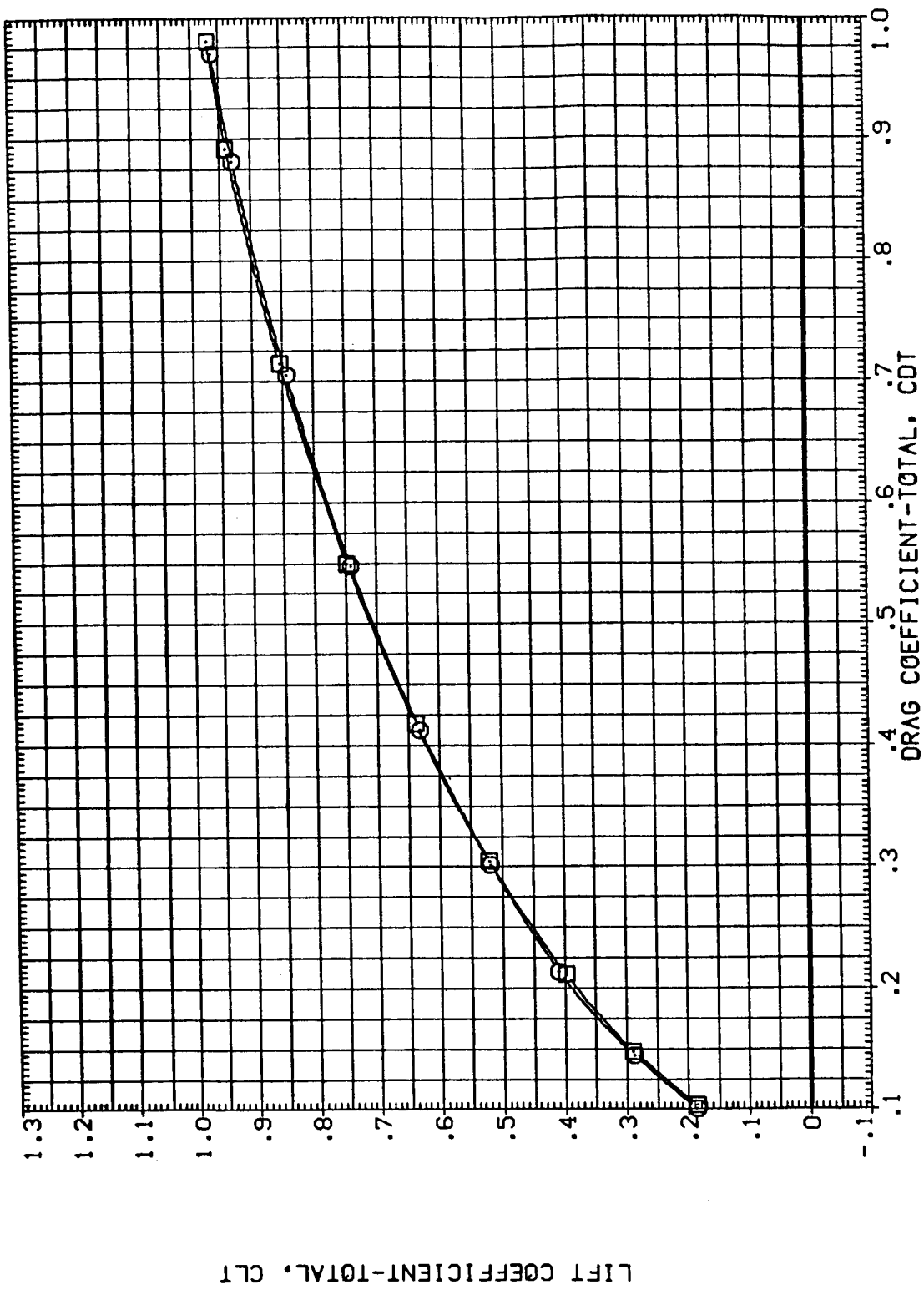


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.  
(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(KE0001)	AMES 3.5-190 0A98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0004)	AMES 3.5-190 0A98 (011-M7-M14)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

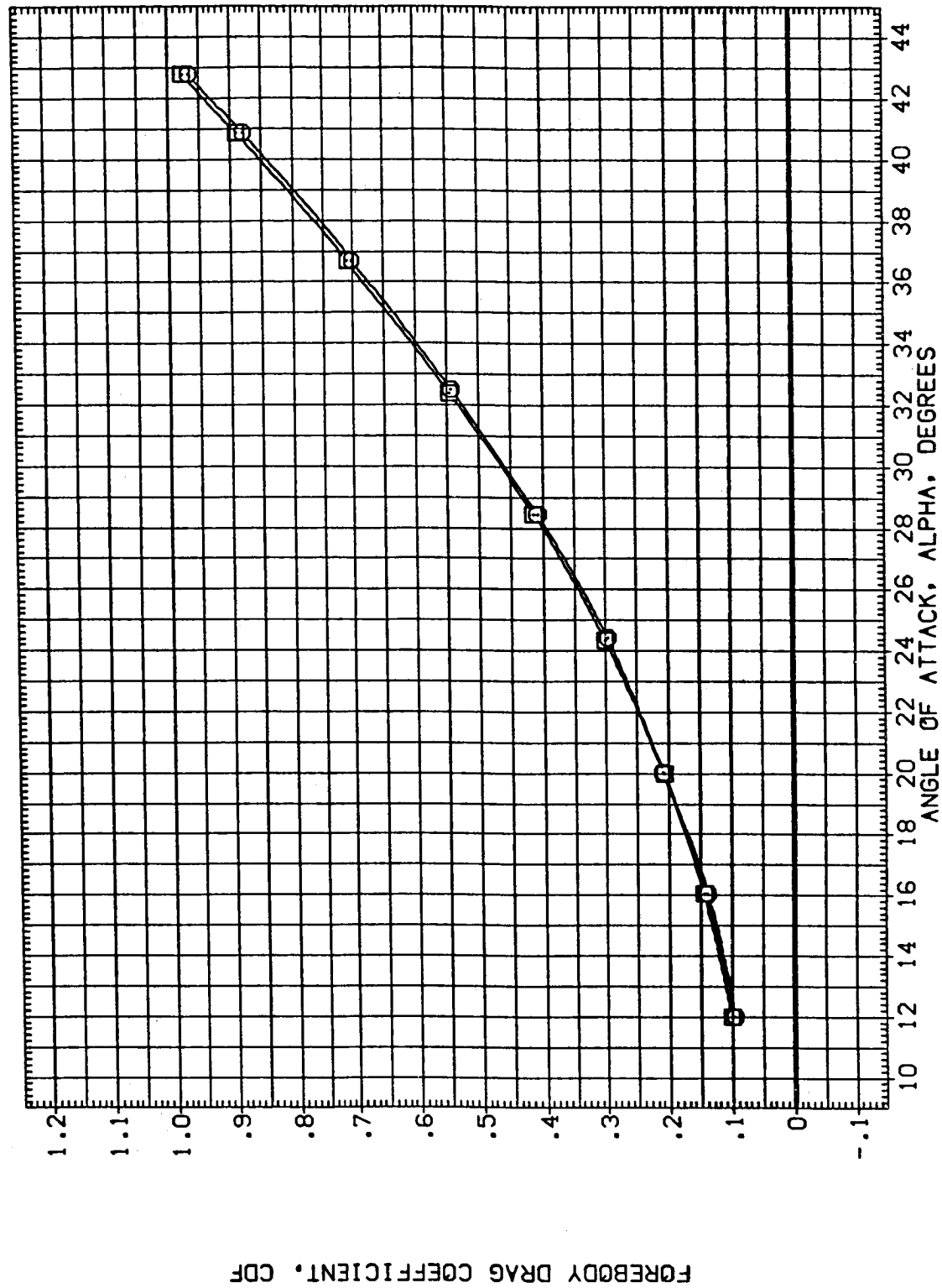


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(M)MACH = 5.25

DATA SET SYMBOL  
(1E0001)  
(1E0004)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7-M14)  
AMES 3.5-190 0A98 (011-M7-M14)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPOBRK  
55.000  
65.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

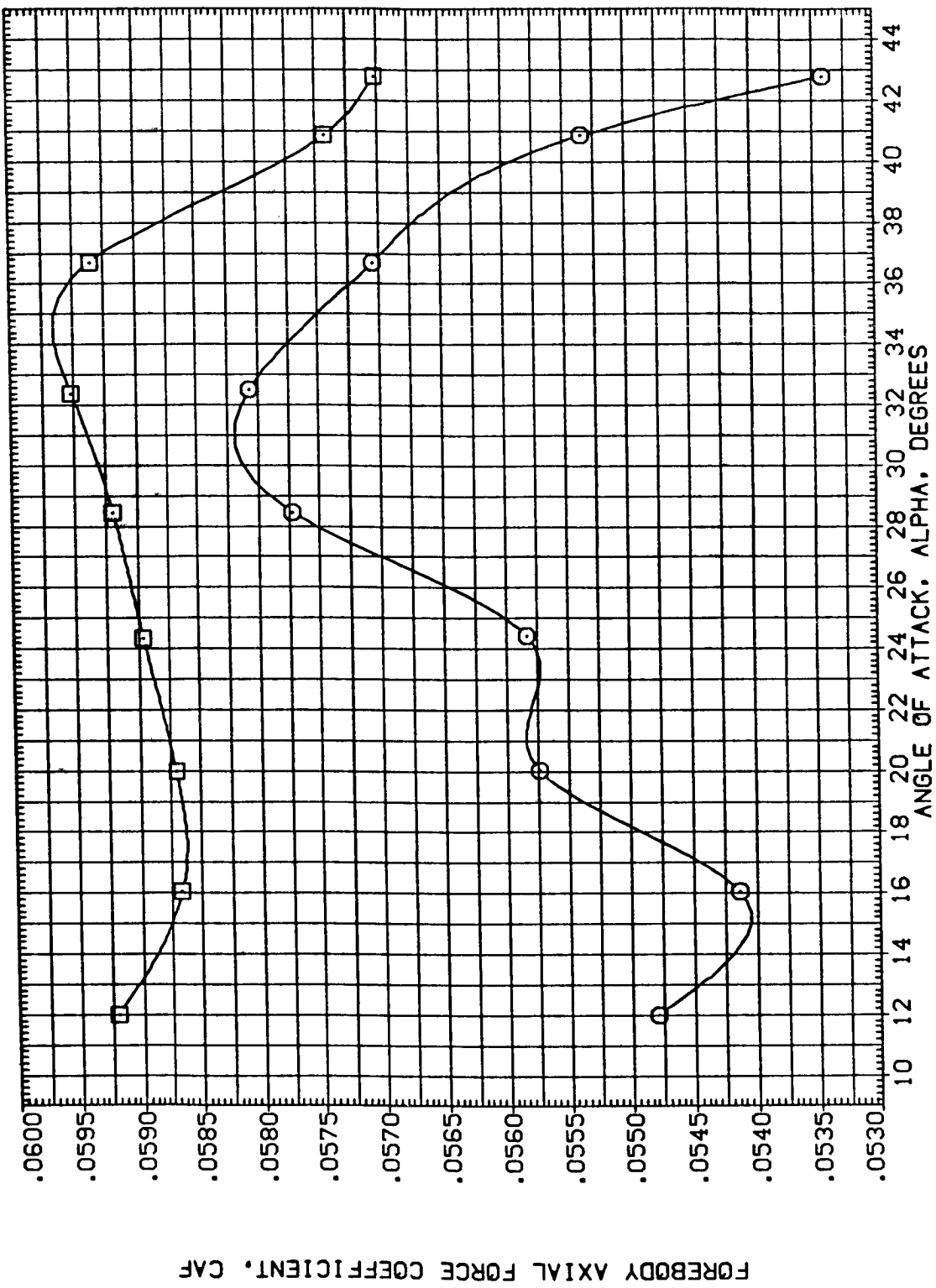


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.  
(A)MACH = 5.25

DATA SET SYMBOL      CONFIGURATION DESCRIPTION  
 (KE0001)      AMES 3.5-190 0/98 (011-M7+M14)  
 (EE0004)      AMES 3.5-190 0/98 (011-M7+M14)

BETA      ELEVON      BDFLAP      SPDBRK  
 .000      .000      -11.700      55.000  
 .000      .000      -11.700      85.000

REFERENCE INFORMATION  
 SREF      2690.0000      SQ.FT.  
 LREF      474.8000      IN.  
 BREF      936.6800      IN.  
 XMRP      1076.7000      IN.X0  
 YMRP      .0000      IN.Y0  
 ZMRP      375.0000      IN.Z0  
 SCALE      .0150

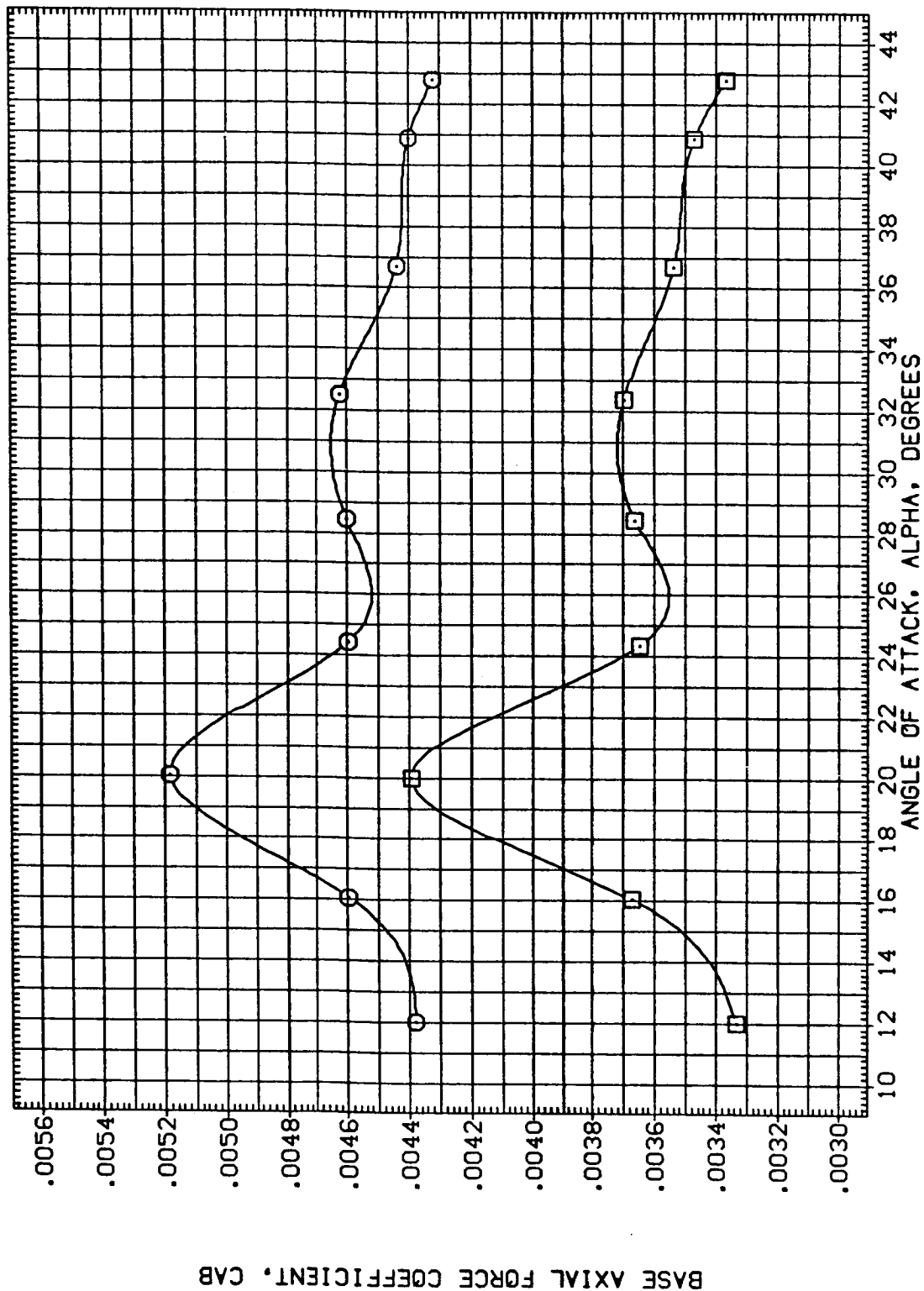


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL  
(1E0001)  
(B00004)

CONFIGURATION DESCRIPTION  
AVES 3.5-190 0A98 (011-M7+M14)  
AVES 3.5-190 0A98 (011-M7+M14)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPOBRK  
55.000  
85.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

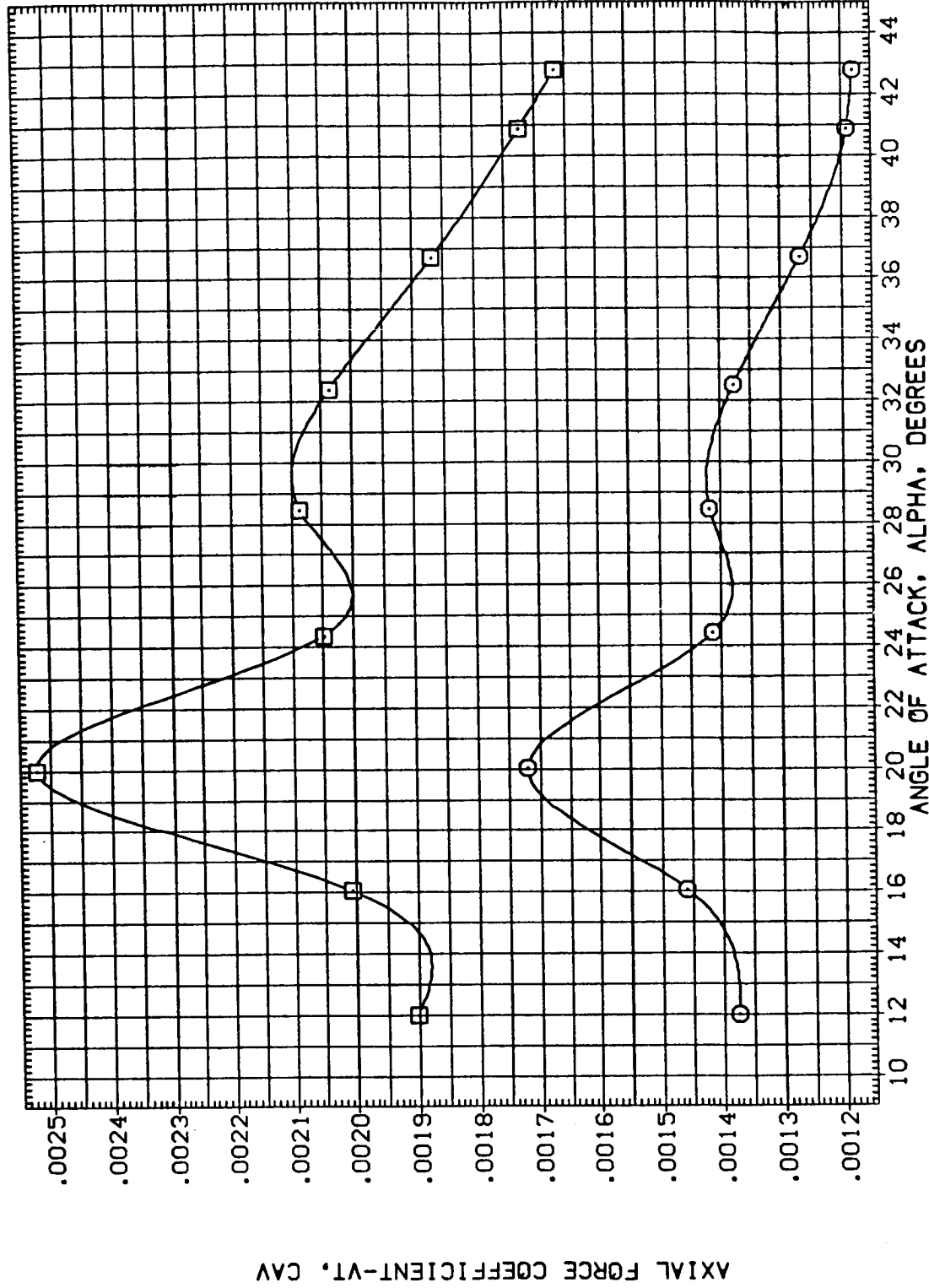


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(1E0001)	AMES 3.5-190 OA98 (011-47+114)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0004)	AMES 3.5-190 OA98 (011-47+114)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.Y0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

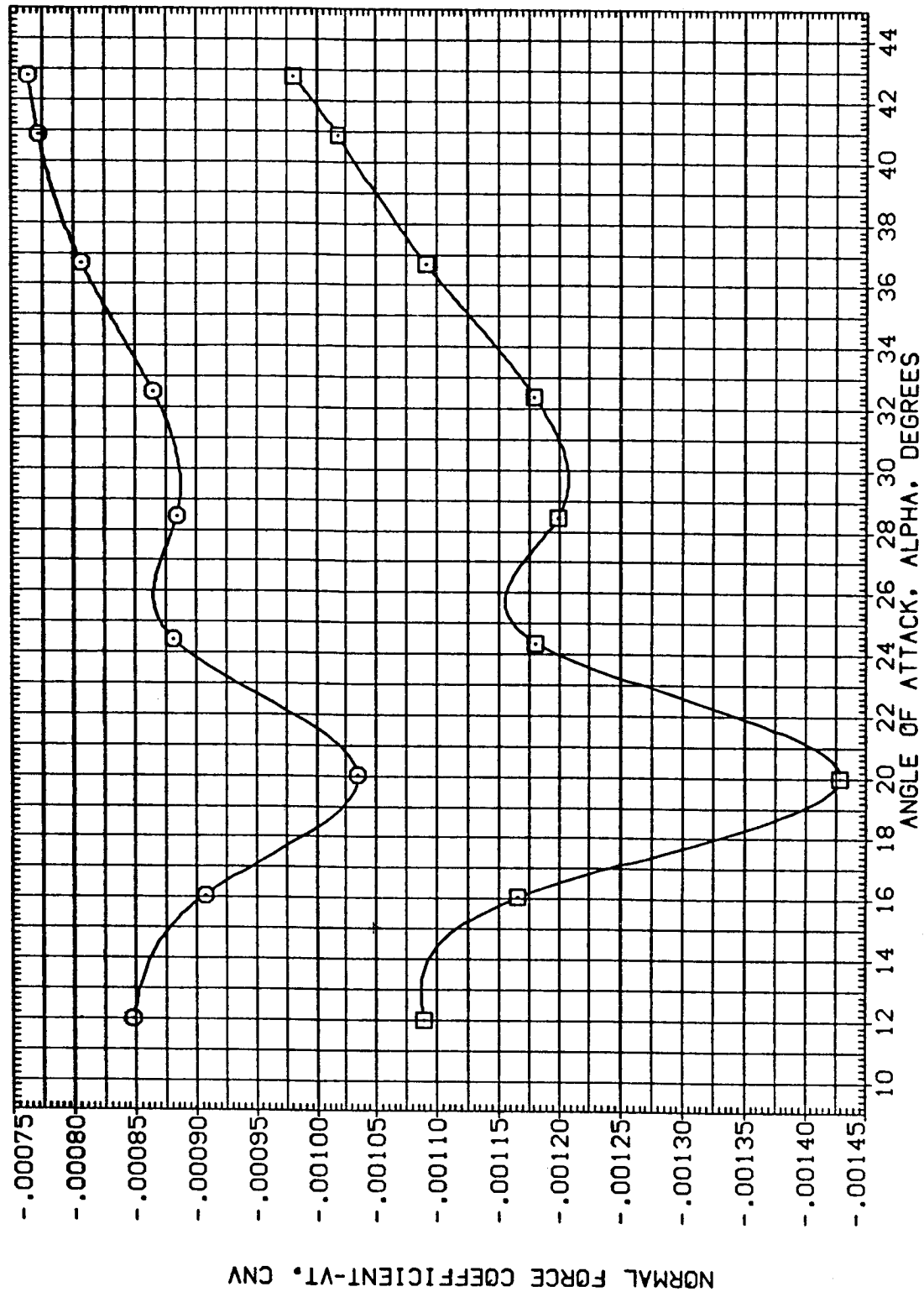


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (1E0001)     $\square$     AVES 3.5-190 OAS8 (011-M7+M14)  
 (BEG004)     $\square$     AVES 3.5-190 OAS8 (011-M7+M14)

BETA    ELEVON    BOFLAP    SPOBRK  
 .000    .000    -11.700    55.000  
 .000    .000    -11.700    65.000

REFERENCE INFORMATION  
 SREF    2690.0000    SQ.FT.  
 LREF    474.8000    IN.  
 BREF    936.6800    IN.  
 XMRP    1076.7000    IN.X0  
 YMRP    .0000    IN.Y0  
 ZMRP    375.0000    IN.Z0  
 SCALE    .0150

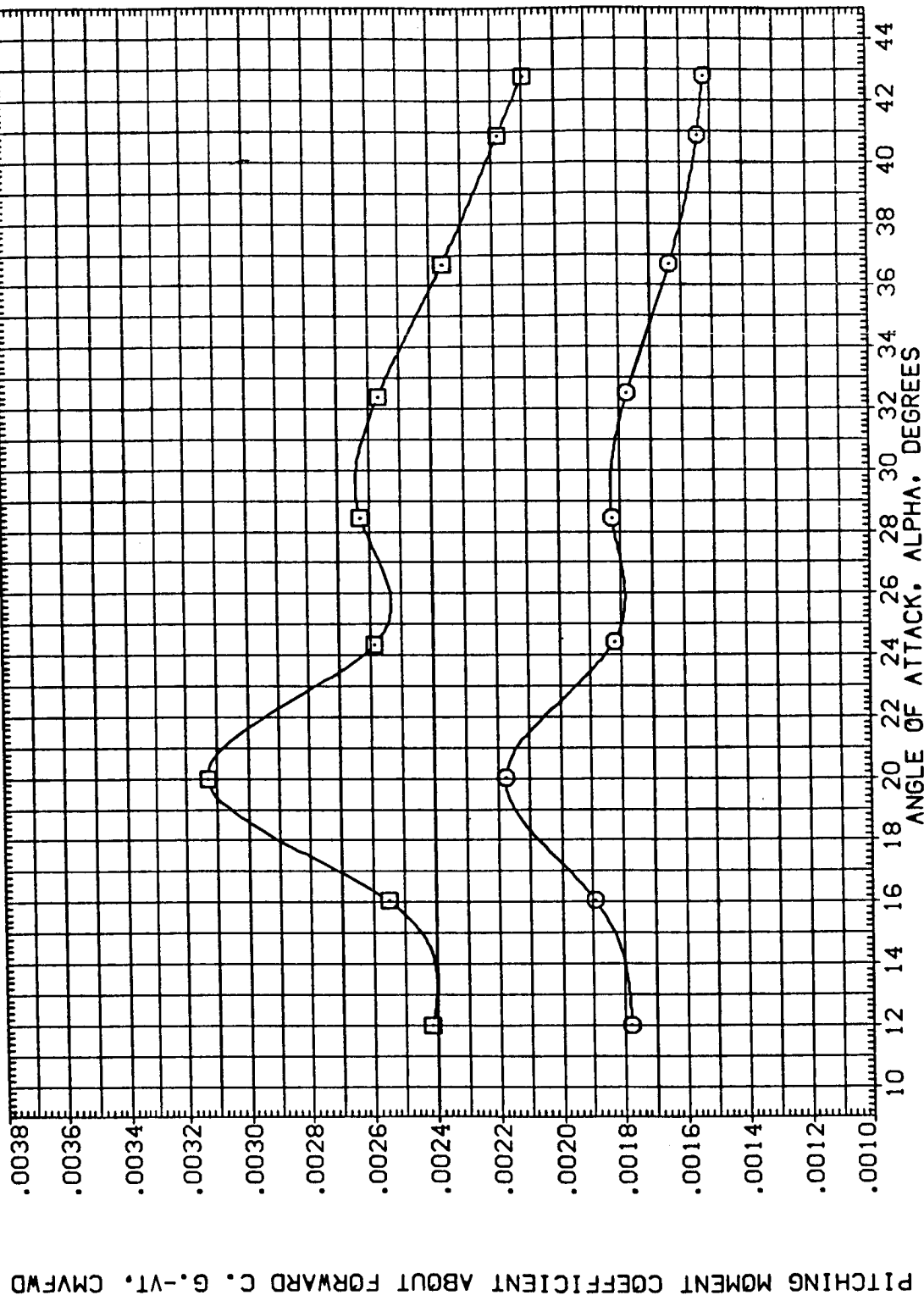


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (1E0001) (BE0004)

CONFIGURATION DESCRIPTION AMES 3.5-190 DAY8 (011-M7+M14) AMES 3.5-190 DAY8 (011-M7+M14)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.XB YMRP .0000 IN.YB ZMRP 375.0000 IN.ZB SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

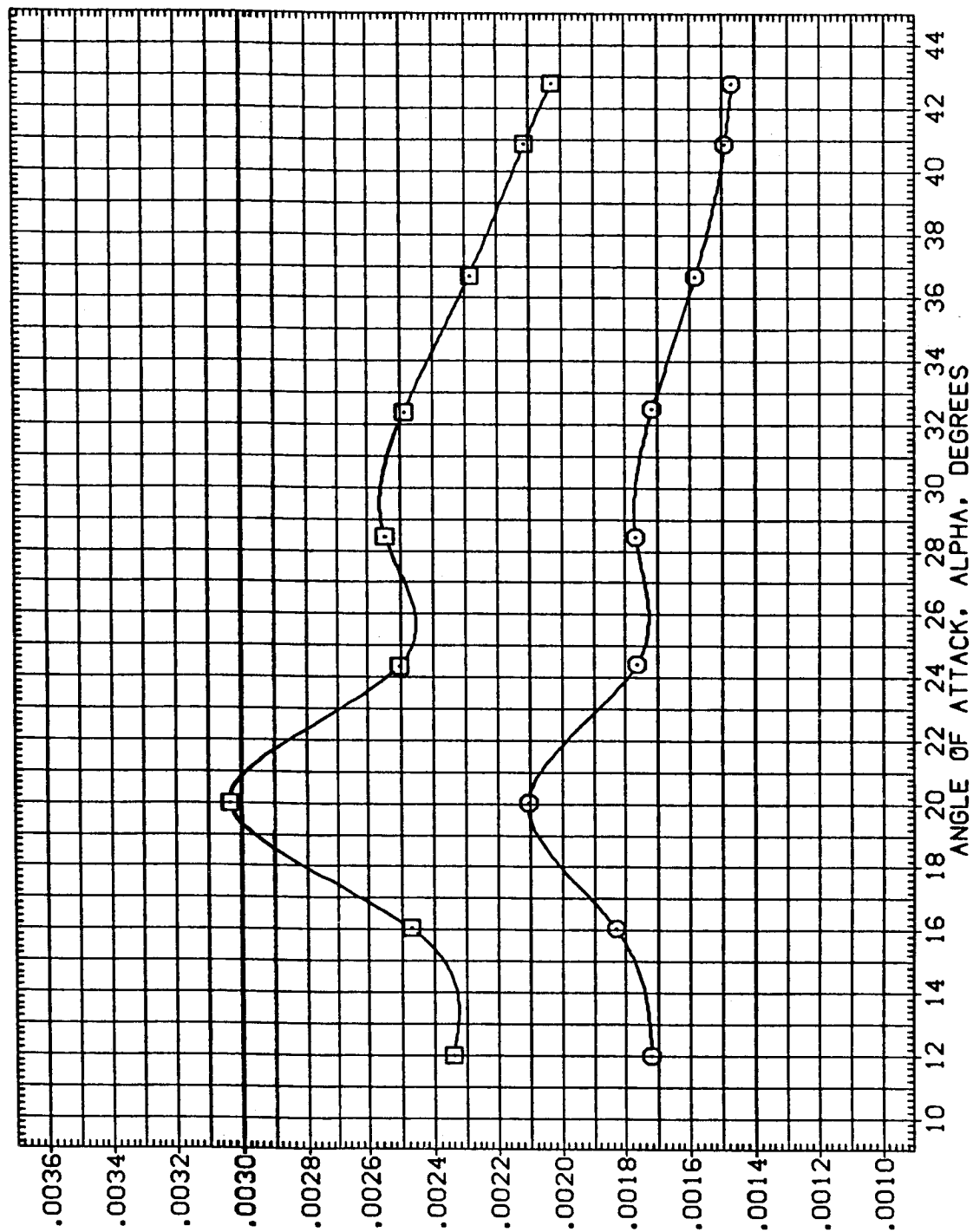


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(M)MACH = 5.25

DATA SET SYMBOL (JE0017) (CE0020)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

BETA .000  
 ELEVON .000  
 BOFLAP -11.700  
 SPDBRK 55.000  
 SREF 2690.0000  
 LREF 474.8000  
 BREF 936.6800  
 XMRP 1076.7000  
 YMRP .0000  
 ZMRP 375.0000  
 SCALE .0150

SO.FT. IN. IN. IN. IN. IN. IN.

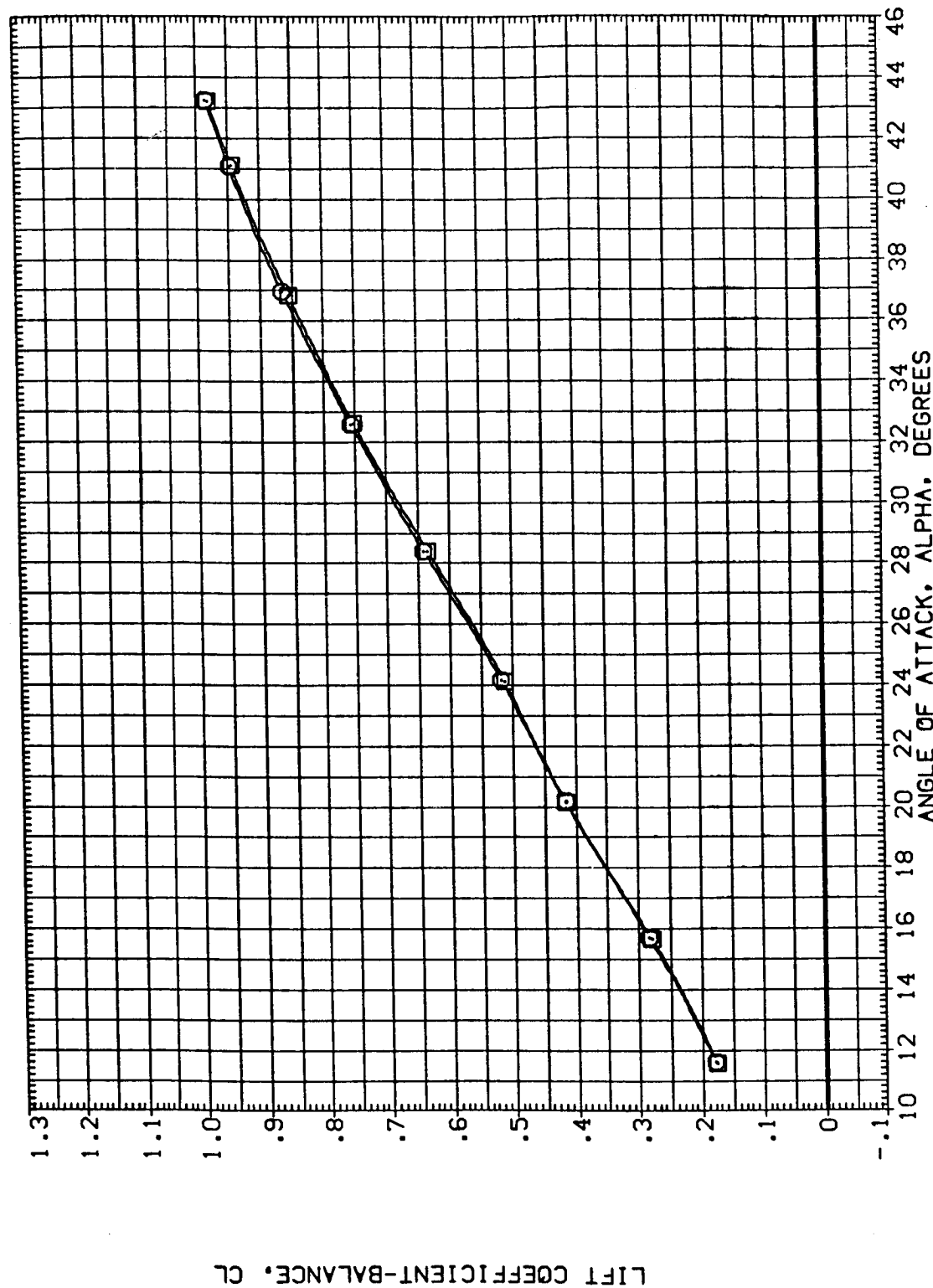


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(JEG017)	AMES 3.5-190 0A98 (011-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEG020)	AMES 3.5-190 0A98 (011-M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.5800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

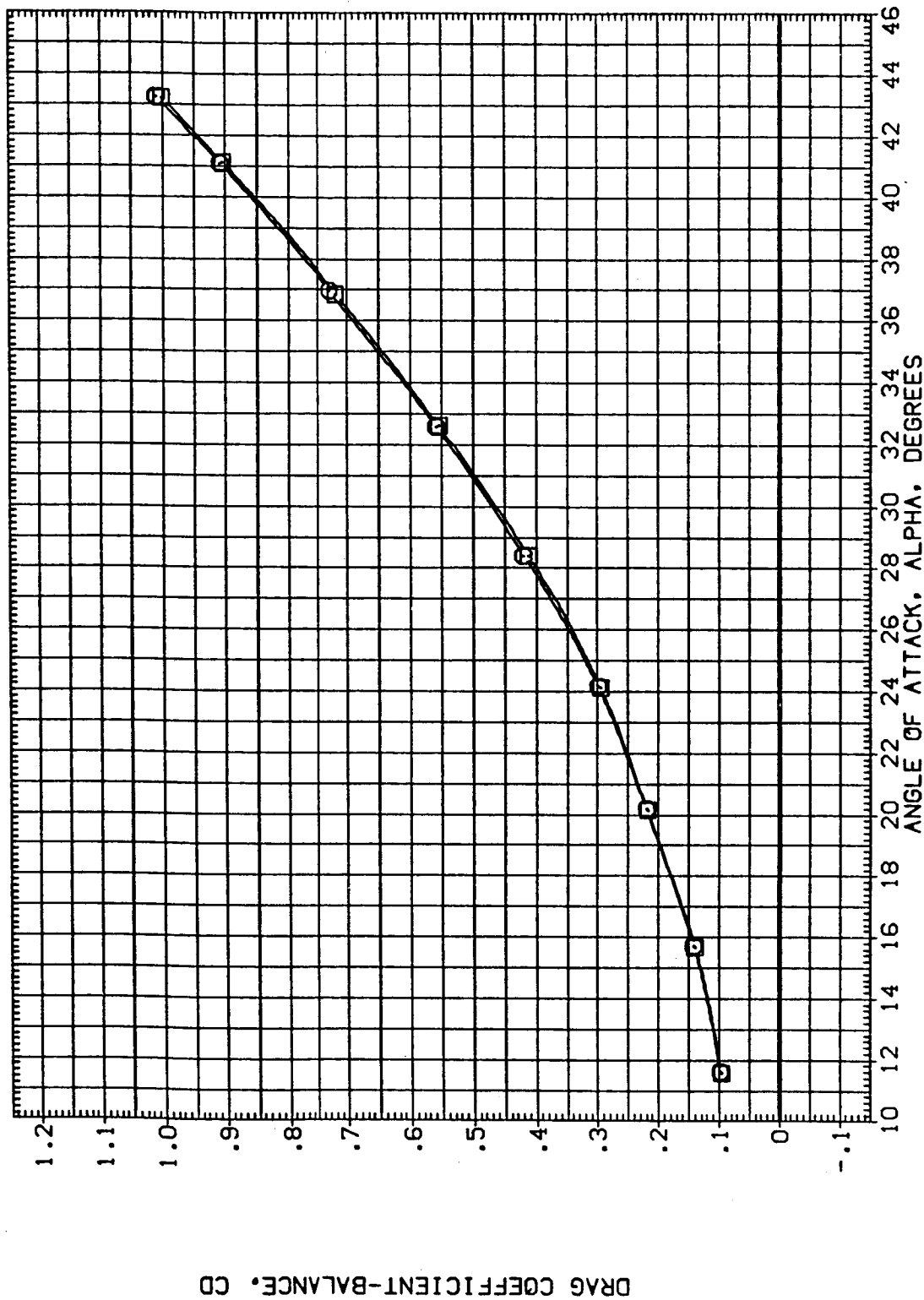


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL: (JEG0017) (CE0020)

CONFIGURATION DESCRIPTION:  
 ANES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)  
 ANES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA: .000

ELEVON: .000

BOFLAP: -11.700

SPOBRK: 55.000

REFERENCE INFORMATION:  
 SREF: 2690.0000 SQ. FT.  
 LREF: 474.8000 IN.  
 BREF: 936.6800 IN.  
 XMRP: 1076.7000 IN.  
 YMRP: .0000 IN.  
 ZMRP: 375.0000 IN.  
 SCALE: .0150

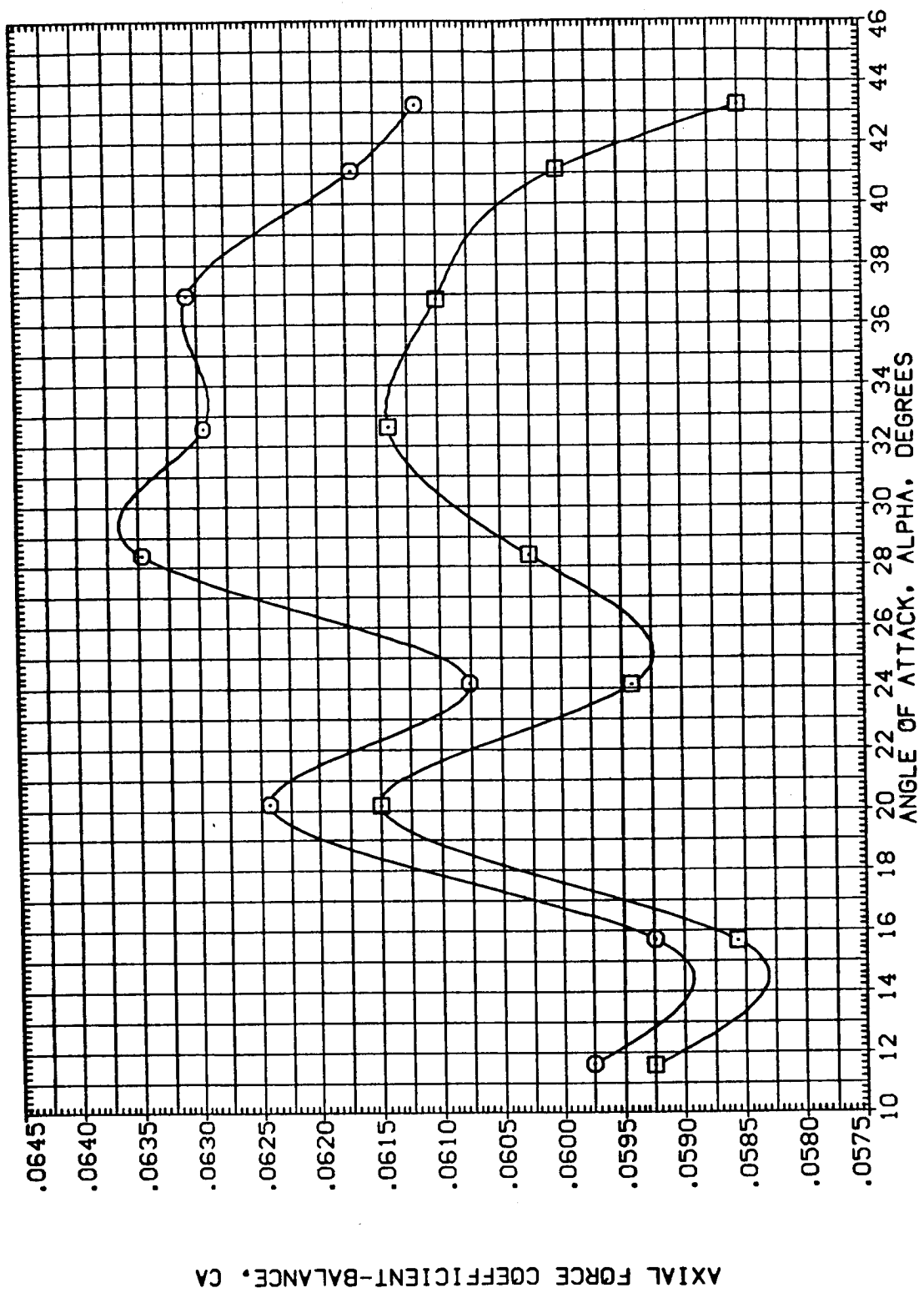


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (JEC017) (CE0020)

CONFIGURATION DESCRIPTION  
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)  
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

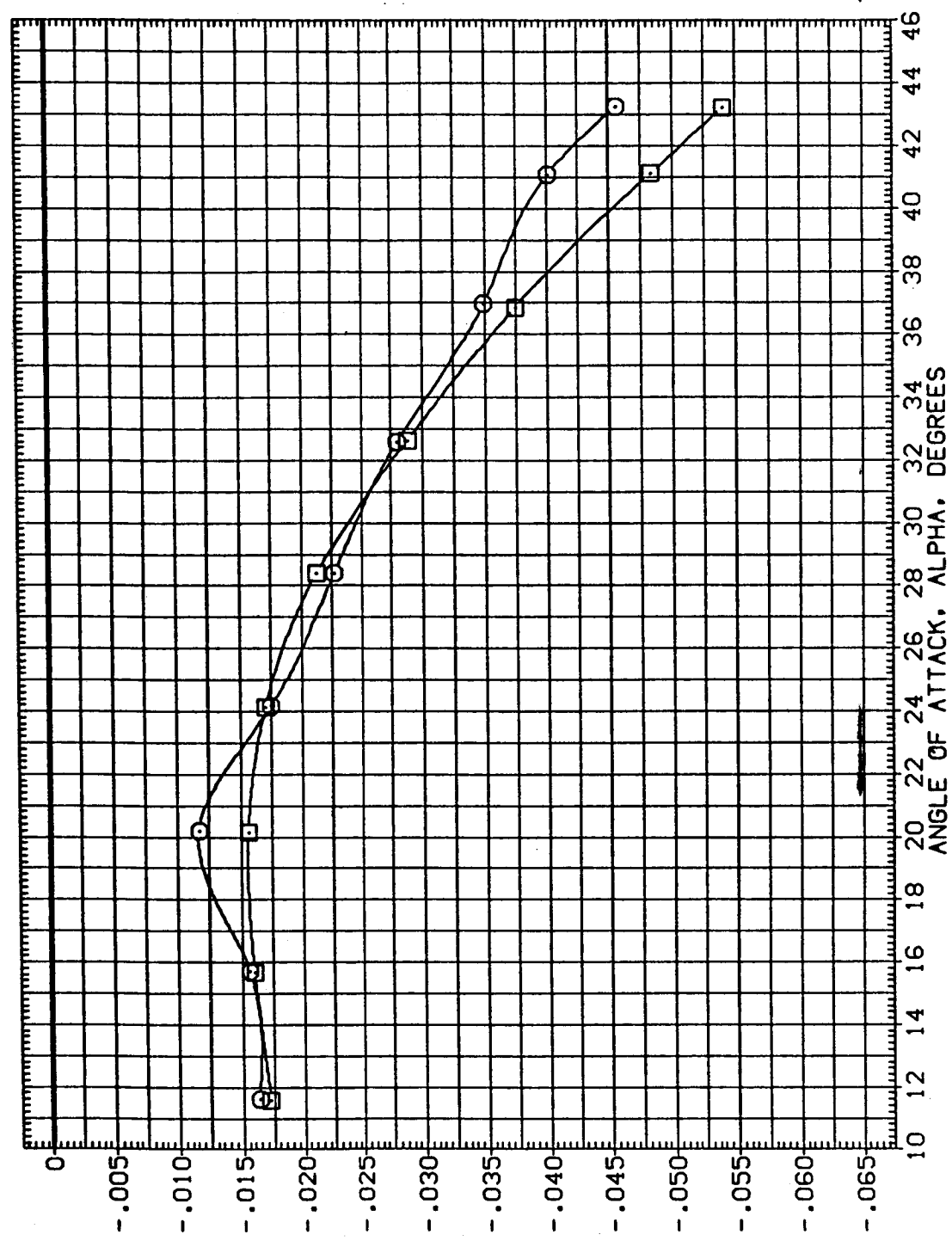


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

CA/MACH = 5.25

DATA S  
(1003P)  
(CEQ02)

Angle of Attack $\alpha$ (Degrees)	Ratio (Circles)	Ratio (Squares)
10	-0.002	-0.002
12	0.000	0.000
14	0.002	0.002
16	0.004	0.004
18	0.006	0.006
20	0.018	0.015
22	0.022	0.020
24	0.024	0.024
26	0.028	0.028
28	0.030	0.030
30	0.032	0.032
32	0.034	0.034
34	0.036	0.036
36	0.040	0.040
38	0.044	0.044
40	0.050	0.050
42	0.054	0.054
44	0.058	0.058

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(JED017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0020)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE .0150

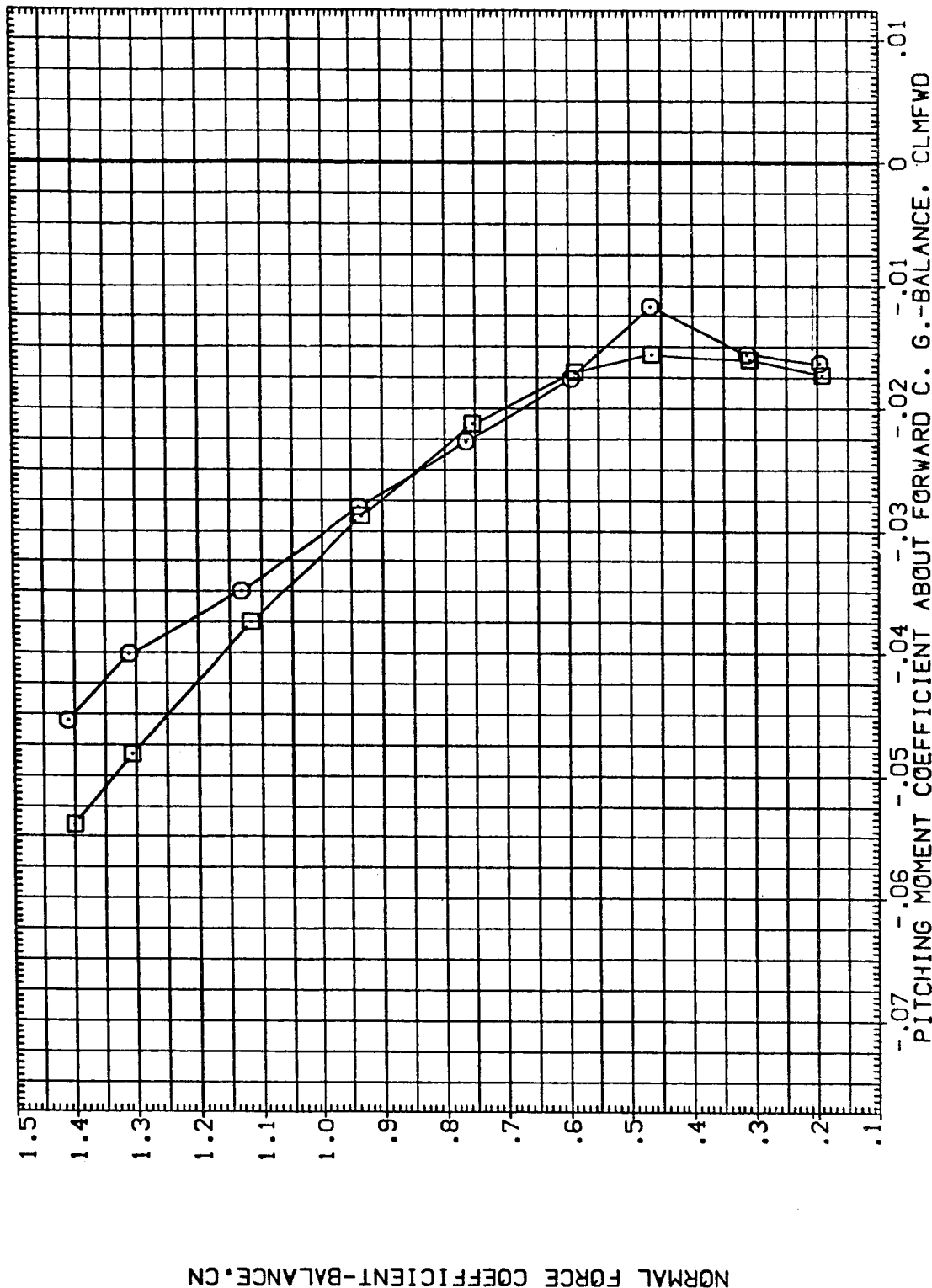


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.  
(A)MACH = 5.25

DATA SET SYMBOL (JEC0017)  
(CE0020)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)  
AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)

BETA .000  
ELEVON .000  
BOFLAP -11.700

SPOBRK 55.000  
85.000

REFERENCE INFORMATION  
SREF 2690.0000 SO.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.XD  
YMRP .0000 IN.YD  
ZMRP 375.0000 IN.ZD  
SCALE .0150

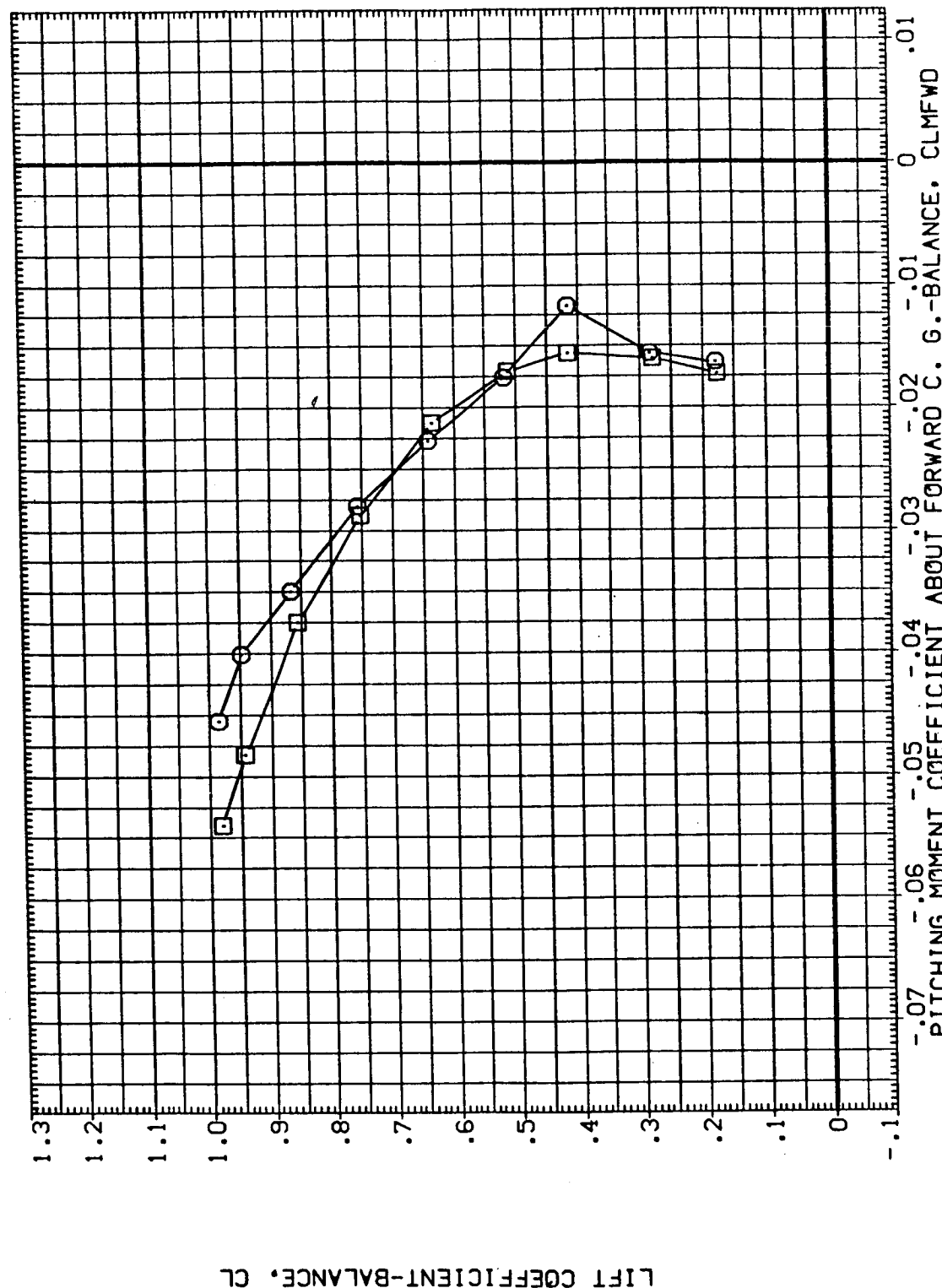


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(JEG017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEG020)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						SREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

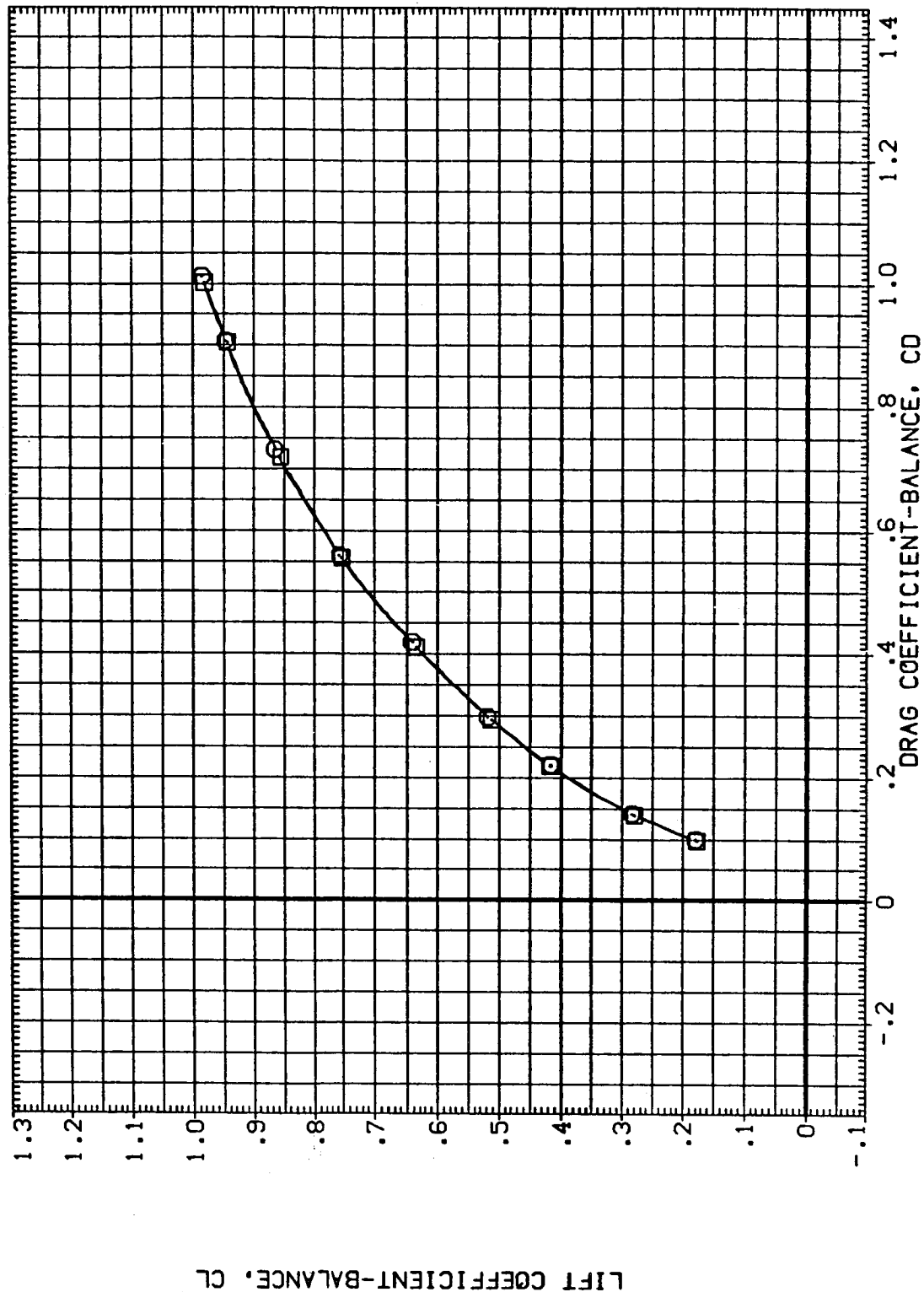


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

(KEQ017)  
(EEQ020)

CONFIGURATION	DESCRIPTION
AMES 3.5-190 0A98	(011-17+M14-N24+DUMMY STRING)
AMES 3.5-190 0A98	(011-17+M14-N24+DUMMY STRING)

BETA  
0000  
0000

ELEVON	BOFLAP
.000	-11.700
.000	-11.700

SPD8RK  
55.000  
85.000

	REFERENCE	INFORMATION
SREF	2690.0000	50.FT
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN.X0
YMRP	.0000	IN.Y0
ZMRP	375.0000	IN.Z0
SCALE	.0150	

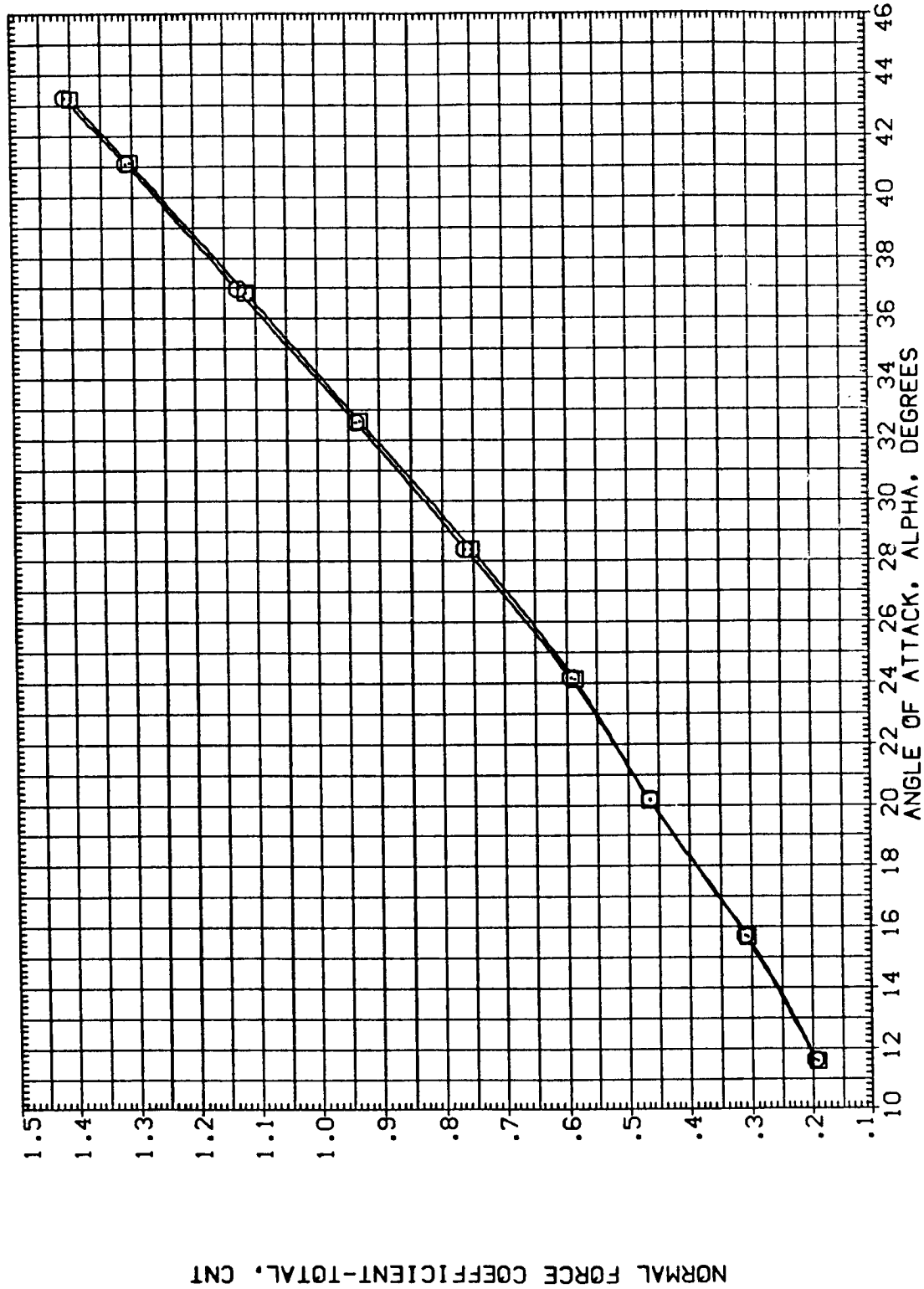


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

$$(\Delta)_{MACH} = 5.25$$



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(KEG017)	APES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEG020)	APES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

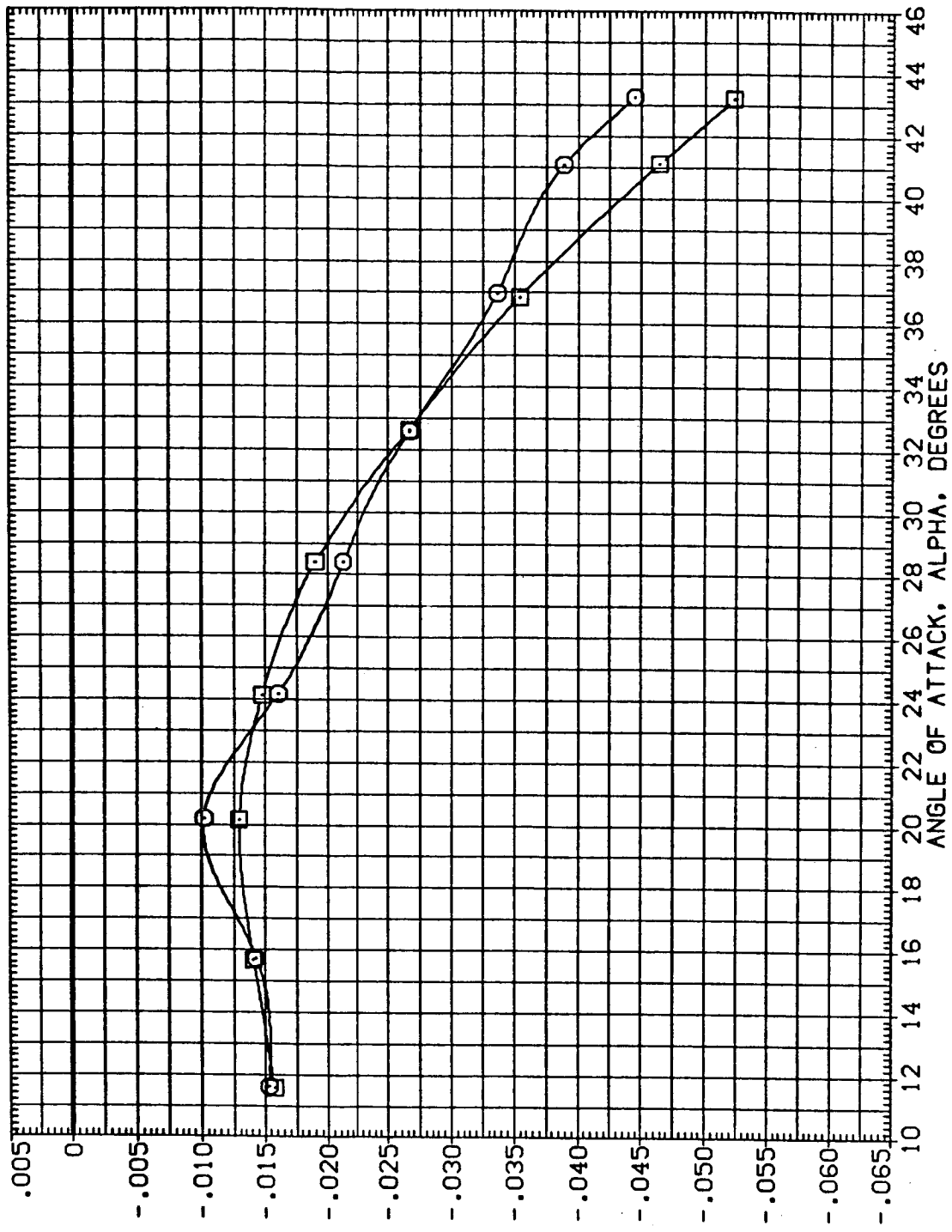


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(KE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0020)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LRREF 474.8000 IN.
						BRREF 936.6900 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

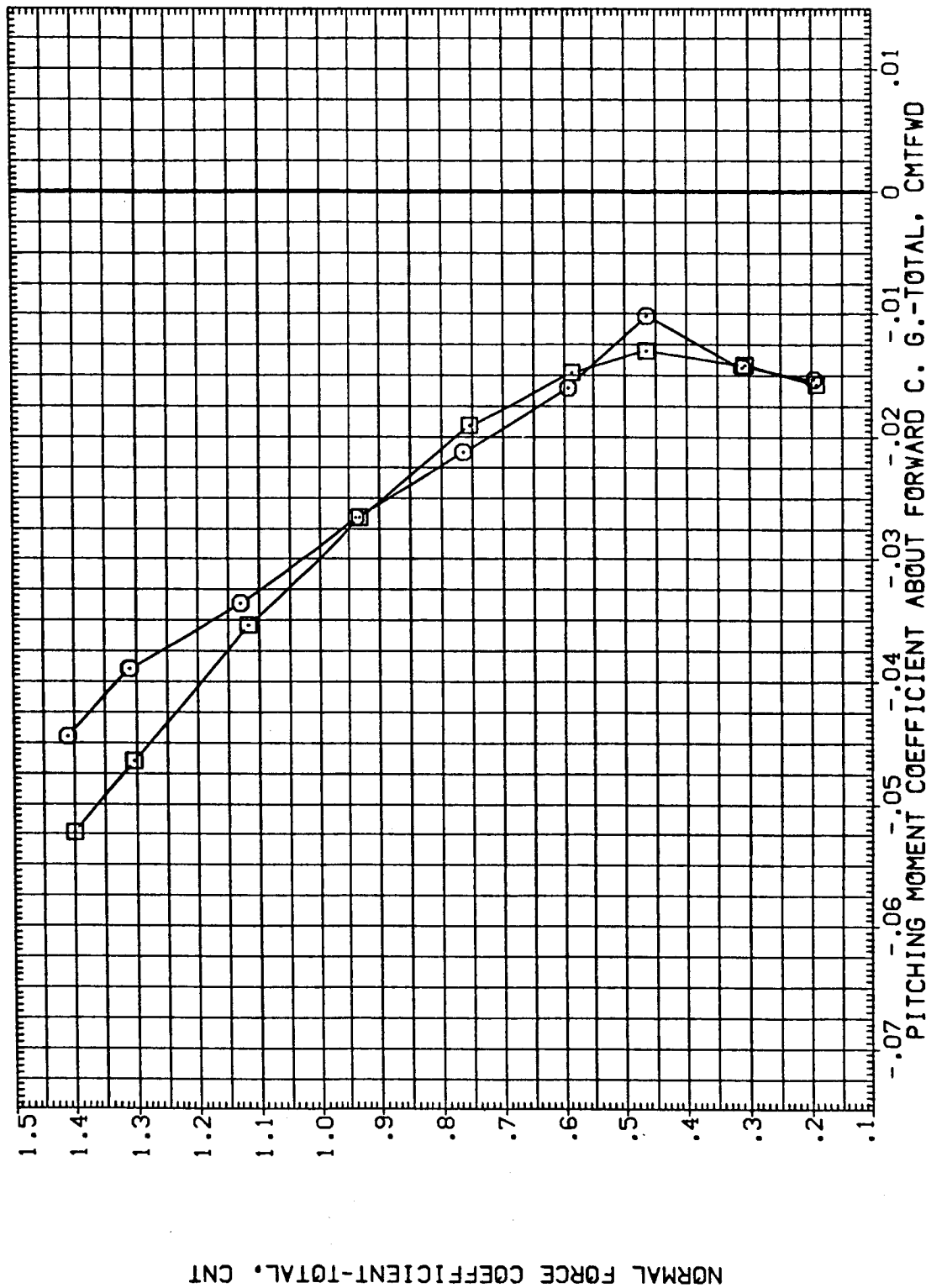


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (KE0017) (EE0020)

CONFIGURATION DESCRIPTION AMES 3.5-190 BA98 (011-M7+M14-N24+DUMMY STING) AMES 3.5-190 BA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPEEDBRK 95000 55.000 85.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XB XMRP 1076.7000 IN. YB YMRP 375.0000 IN. ZB ZMRP 375.0000 IN. YB SCALE .0150

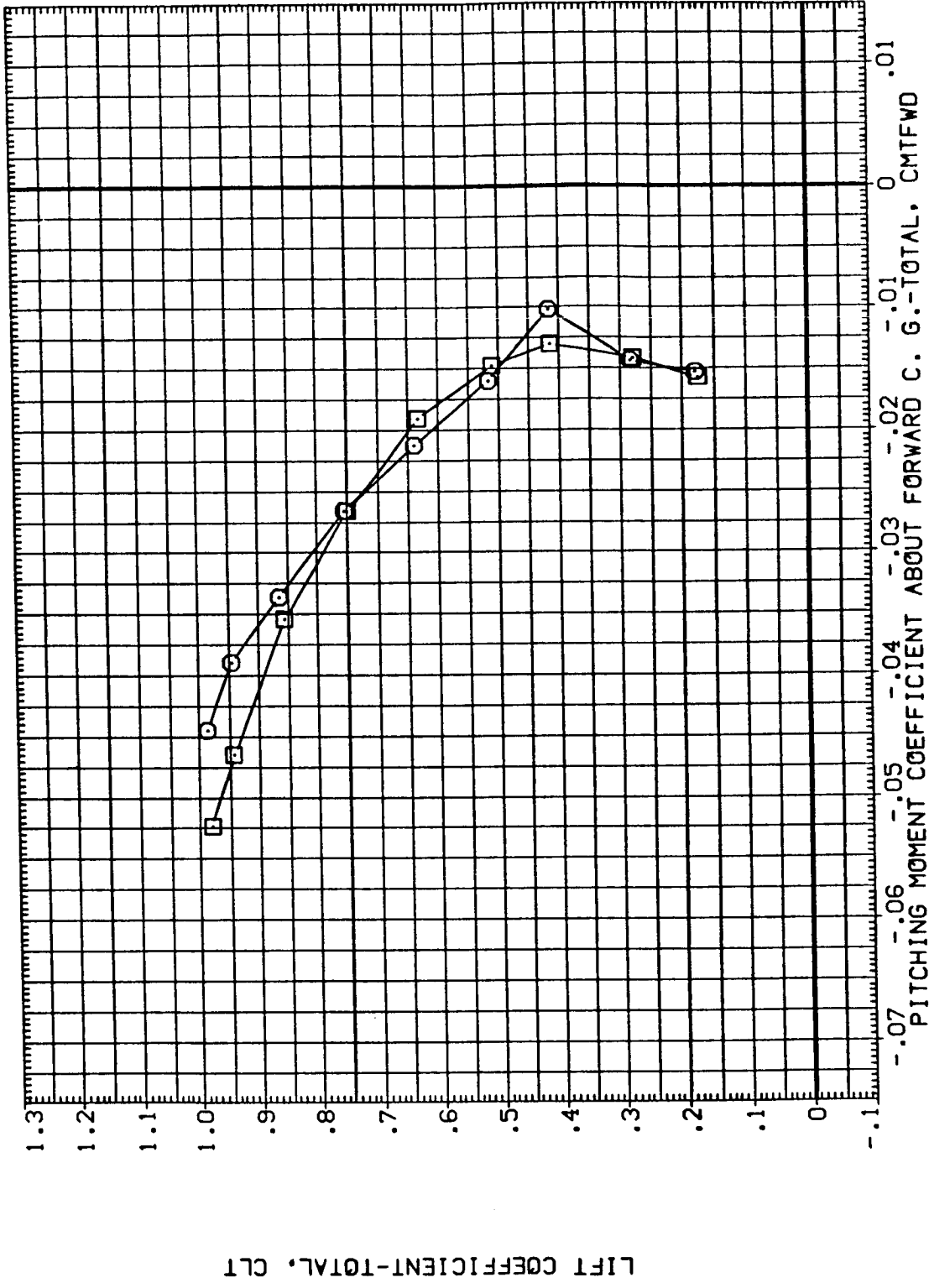


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A) MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(KE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0020)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

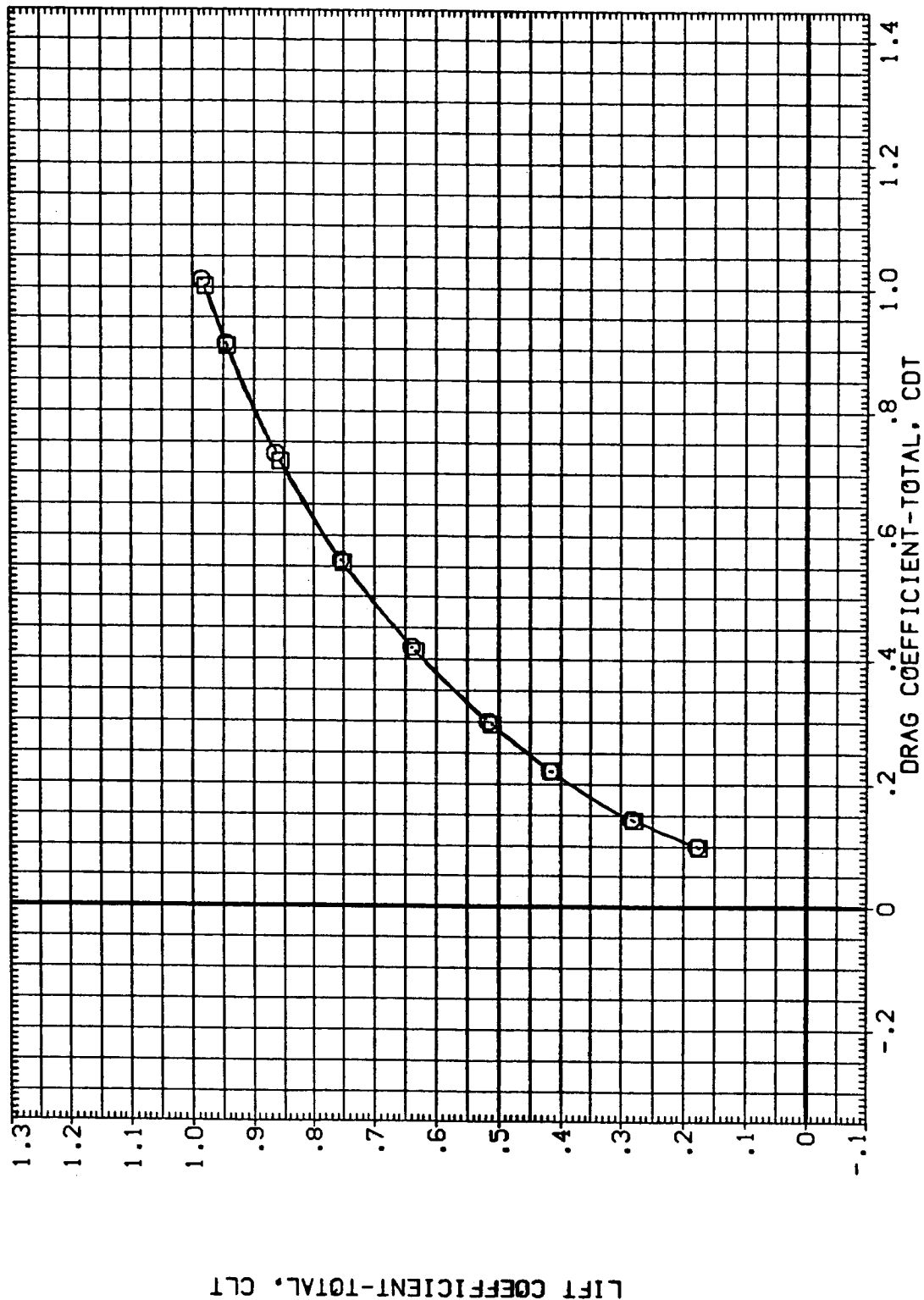


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (KEG017) (EE0020)

CONFIGURATION DESCRIPTION  
 ANES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)  
 ANES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 85.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

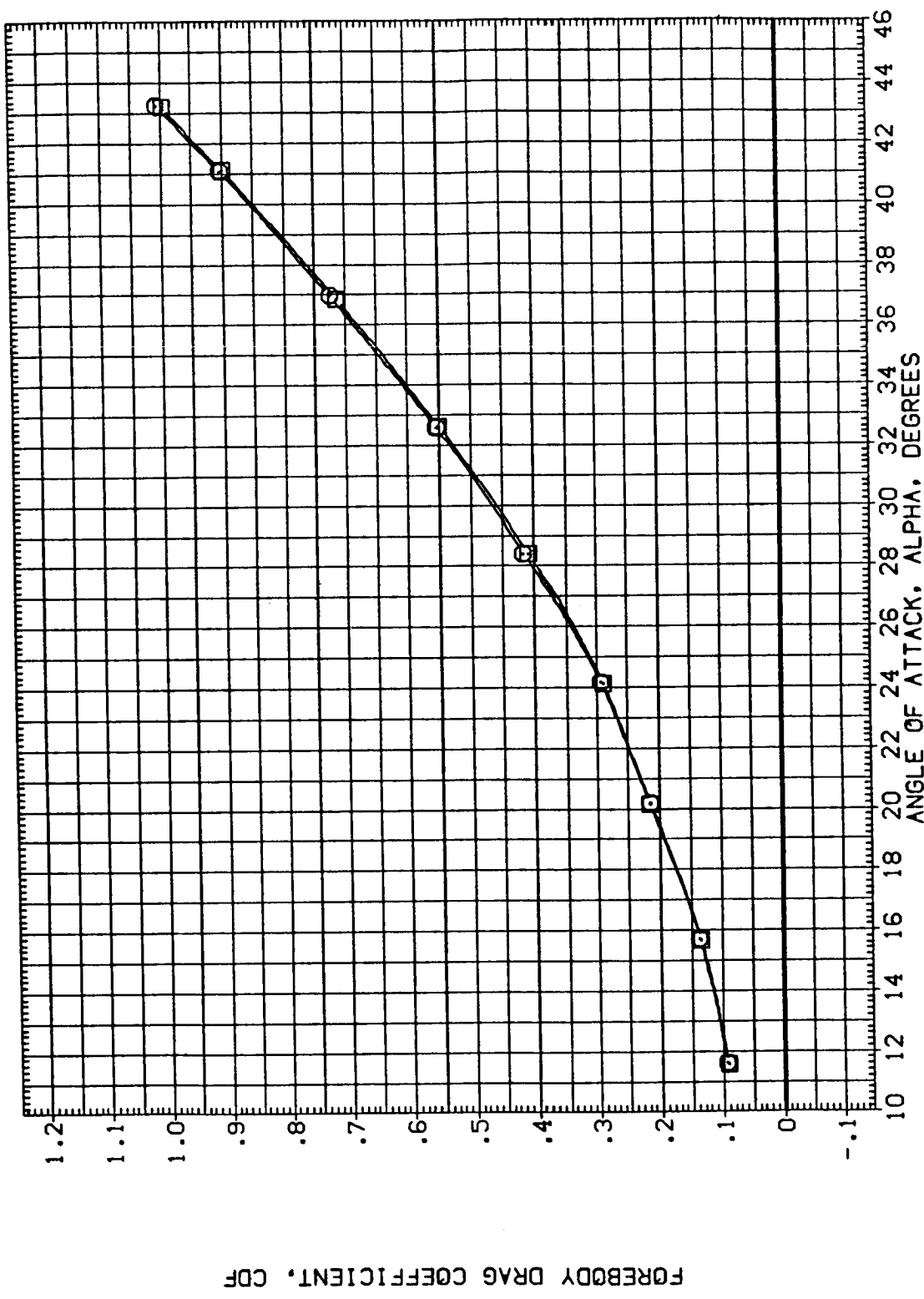


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.  
 (A)MACH = 5.25  
 PAGE 162

DATA SET SYMBOL: (KE0017) (EE0020)

CONFIGURATION DESCRIPTION: AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING) AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)

BETA: .000 .000

ELEVON: .000 .000

BOFLAP: -11.700 -11.700

SPOBRK: 55.000 85.000

REFERENCE INFORMATION:

	SQ. FT.
SREF	2690.0000
LREF	474.8000
BREF	936.6800
XMRP	1076.7000
YMRP	.0000
ZMRP	375.0000
SCALE	.0150

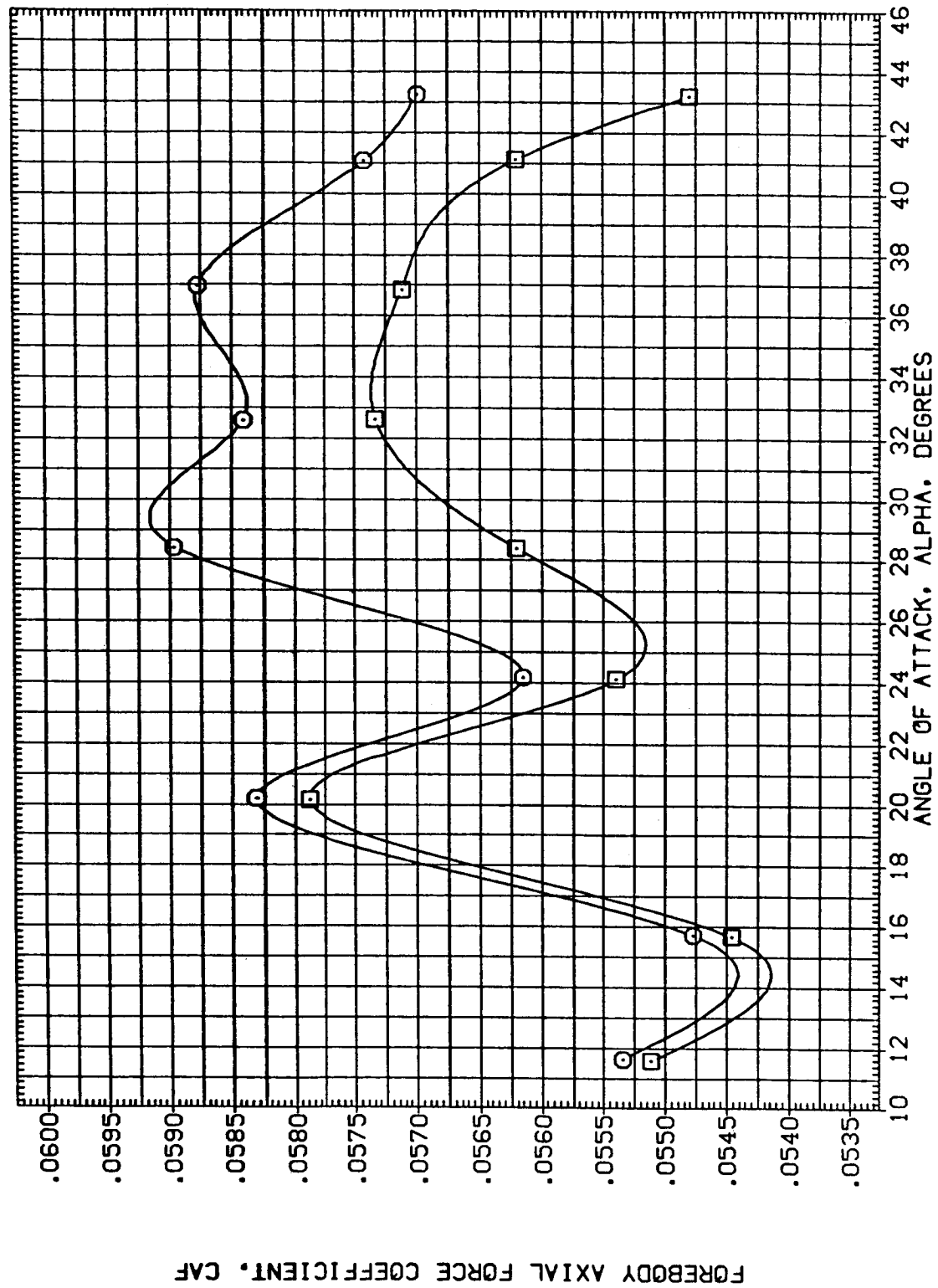


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(KE0017)	AVES 3.5-190 CA98 (011-M7-M14-N24-DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0020)	AVES 3.5-190 CA98 (011-M7-M14-N24-DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

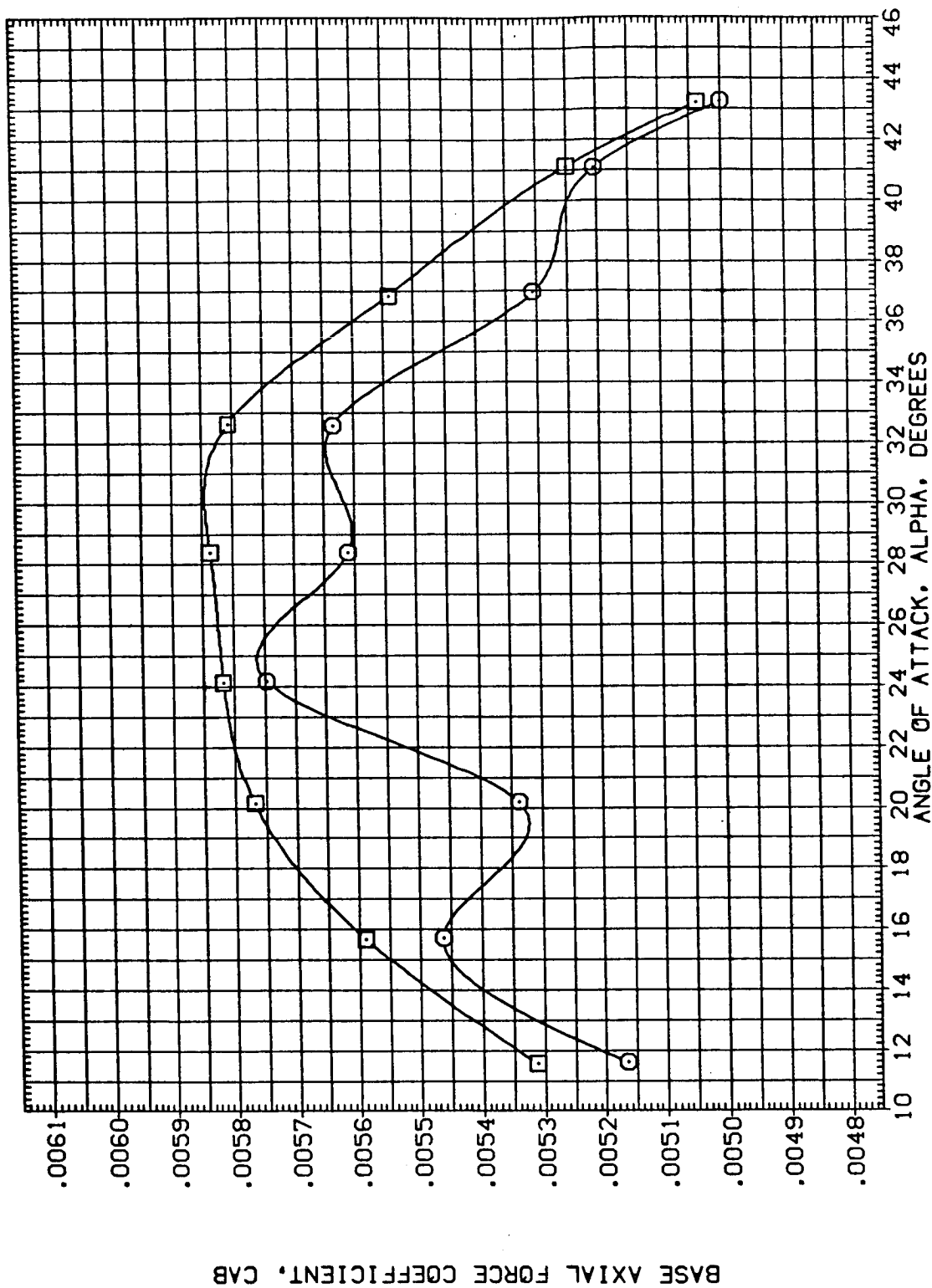


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

CA/MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(1EQ017)	AMES 3.5-190 0A98 (011-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(8EQ020)	AMES 3.5-190 0A98 (011-M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

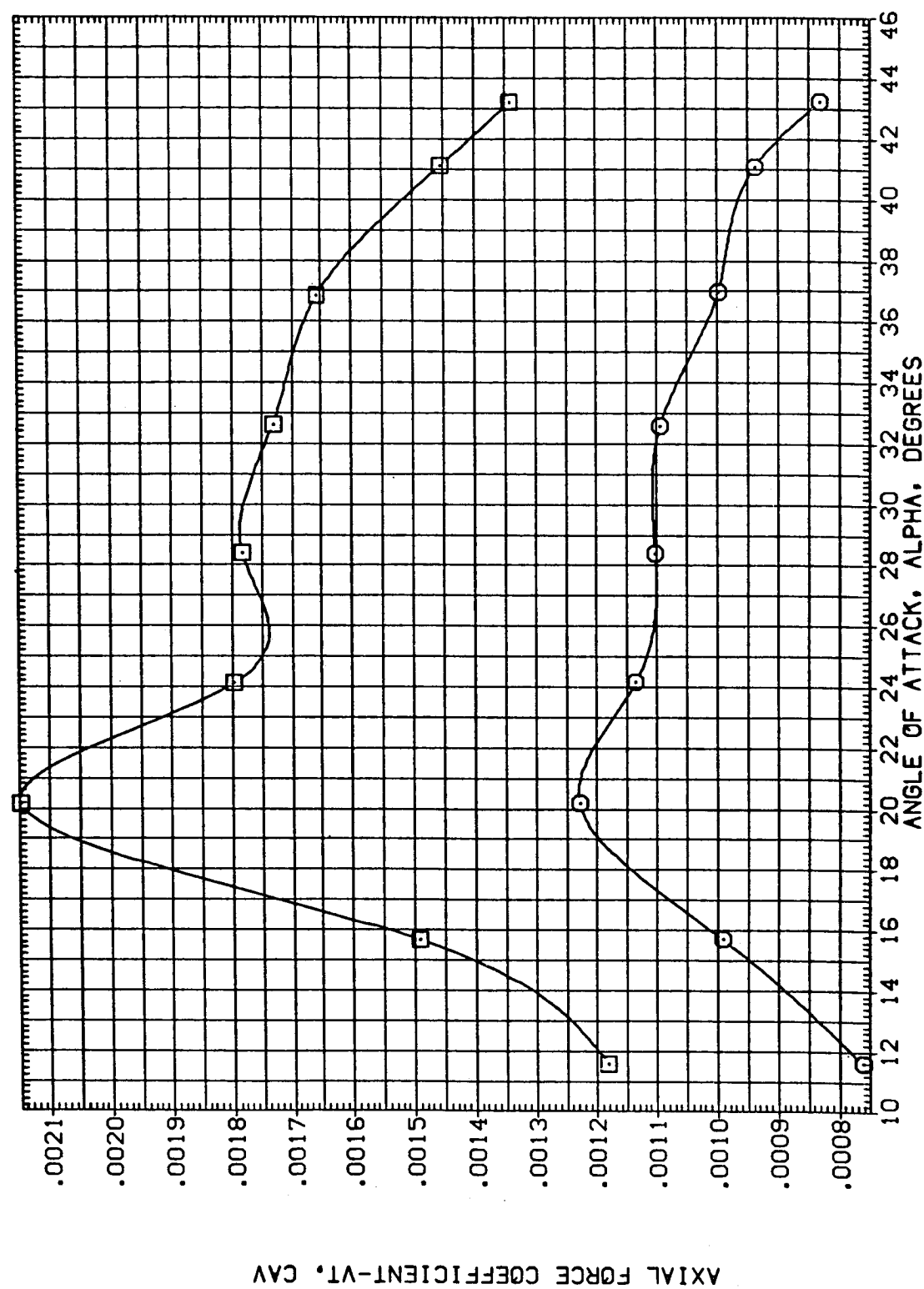


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (1EQ017)  
(8EQ020)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 GAS8 (011-M7-M14-N24-DUMMY STING)  
AMES 3.5-190 GAS8 (011-M7-M14-N24-DUMMY STING)

BETA .000  
ELEVON .000  
BOFLAP -11.700  
SPDBRK 55.000  
85.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

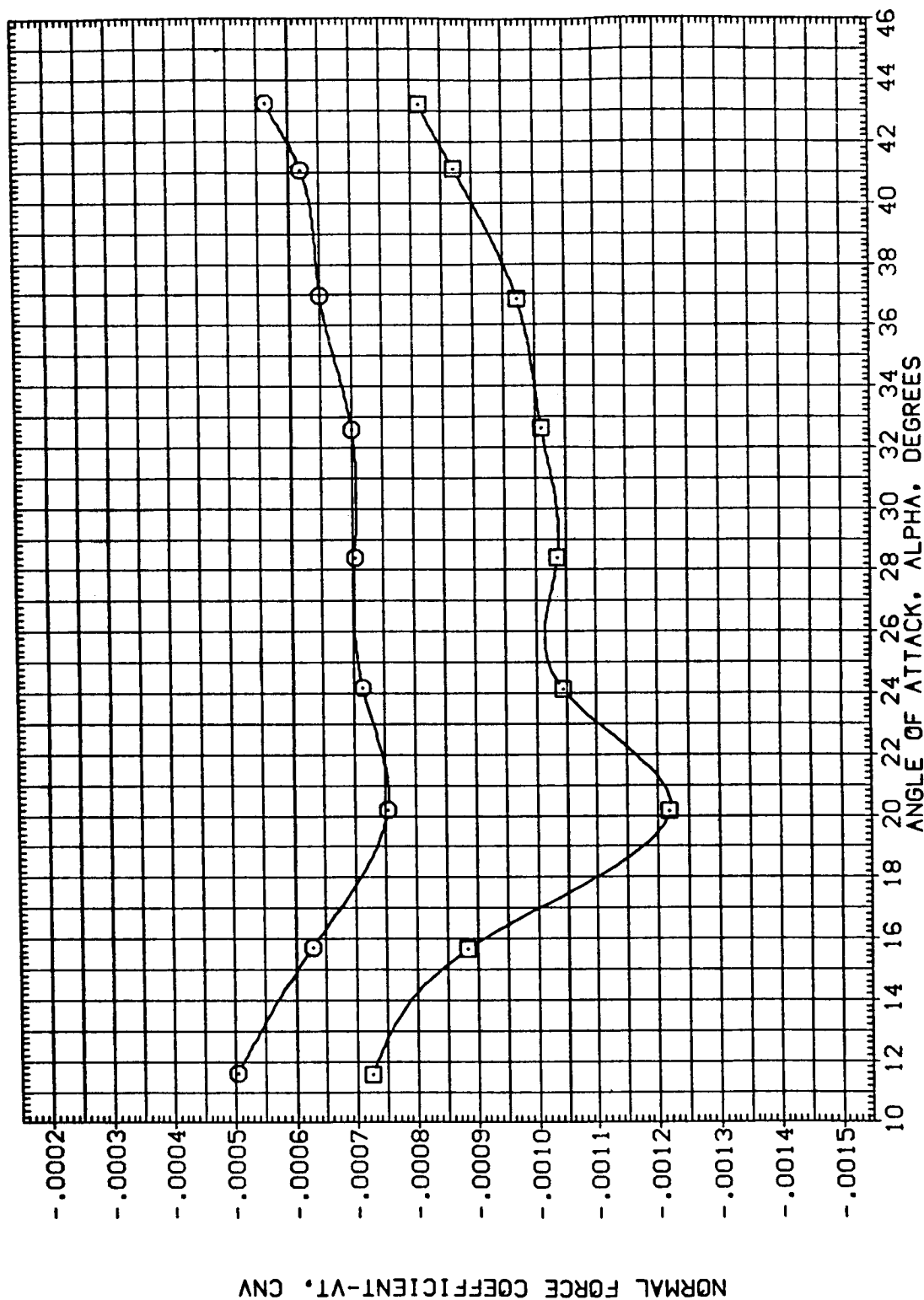


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (1E0017) (BE0020) CONFIGURATION DESCRIPTION (011-M7+M14-N24+DUMMY STING) (011-M7+M14-N24+DUMMY STING) BETA .000 .000 ELEVON .000 .000 BOFLAP -11.700 -11.700 SPOBRK 55.000 85.000 REFERENCE INFORMATION SQ. FT. SREF 2690.0000 LREF 474.8000 BREF 936.6800 XMRP 1076.7000 YMRP .0000 ZMRP 375.0000 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-VT, CMVFWD

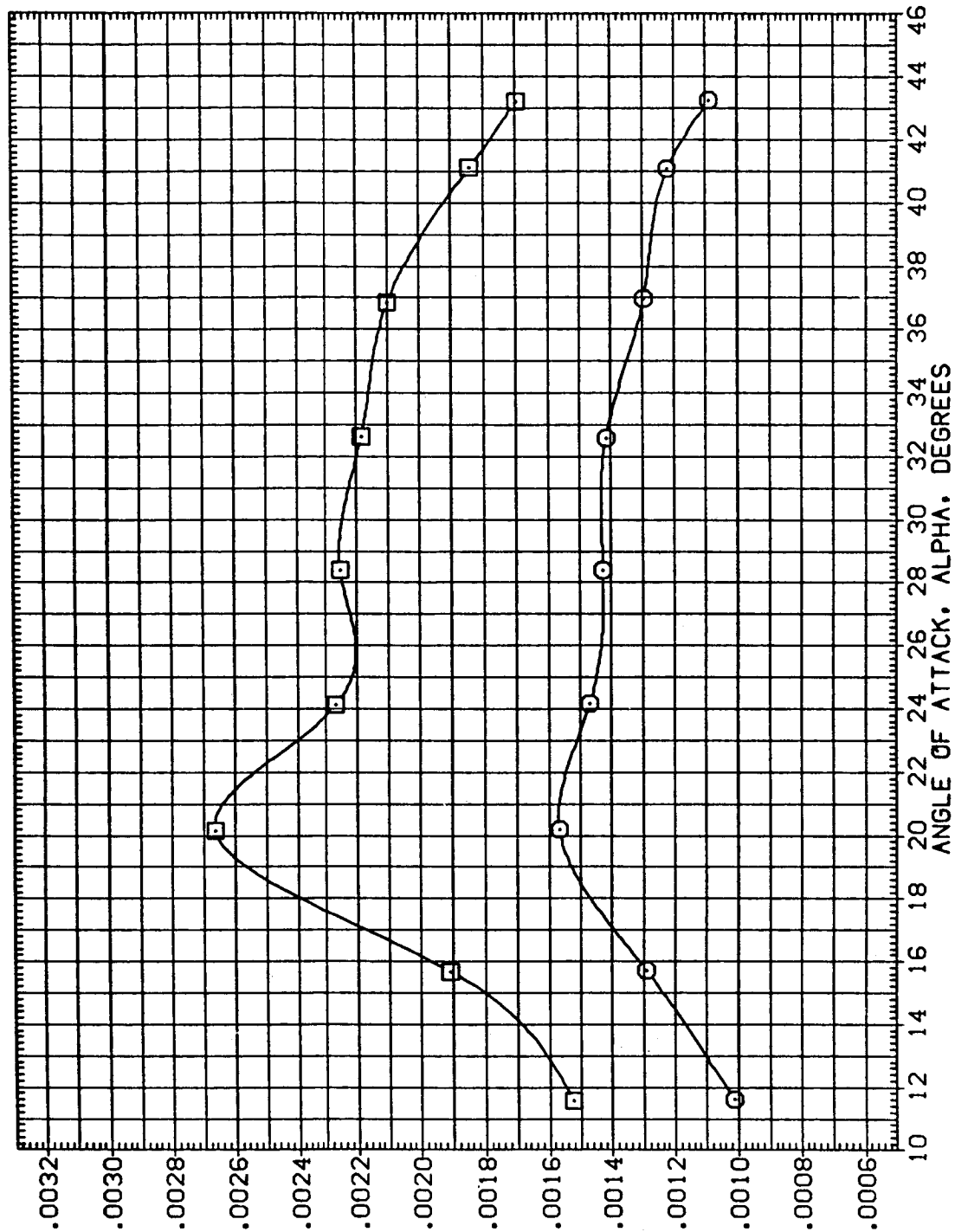


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.

(A)MACH = 5.25

DATA SET SYMBOL (1EQ017) (8EQ020)

CONFIGURATION DESCRIPTION  
 ARES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)  
 ARES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BDFLAP -11.700 -11.700

SPOBRK 55.000 95.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN. X0  
 YMRP .0000 IN. Y0  
 ZMRP 375.0000 IN. Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G. -V1, CMVAFT

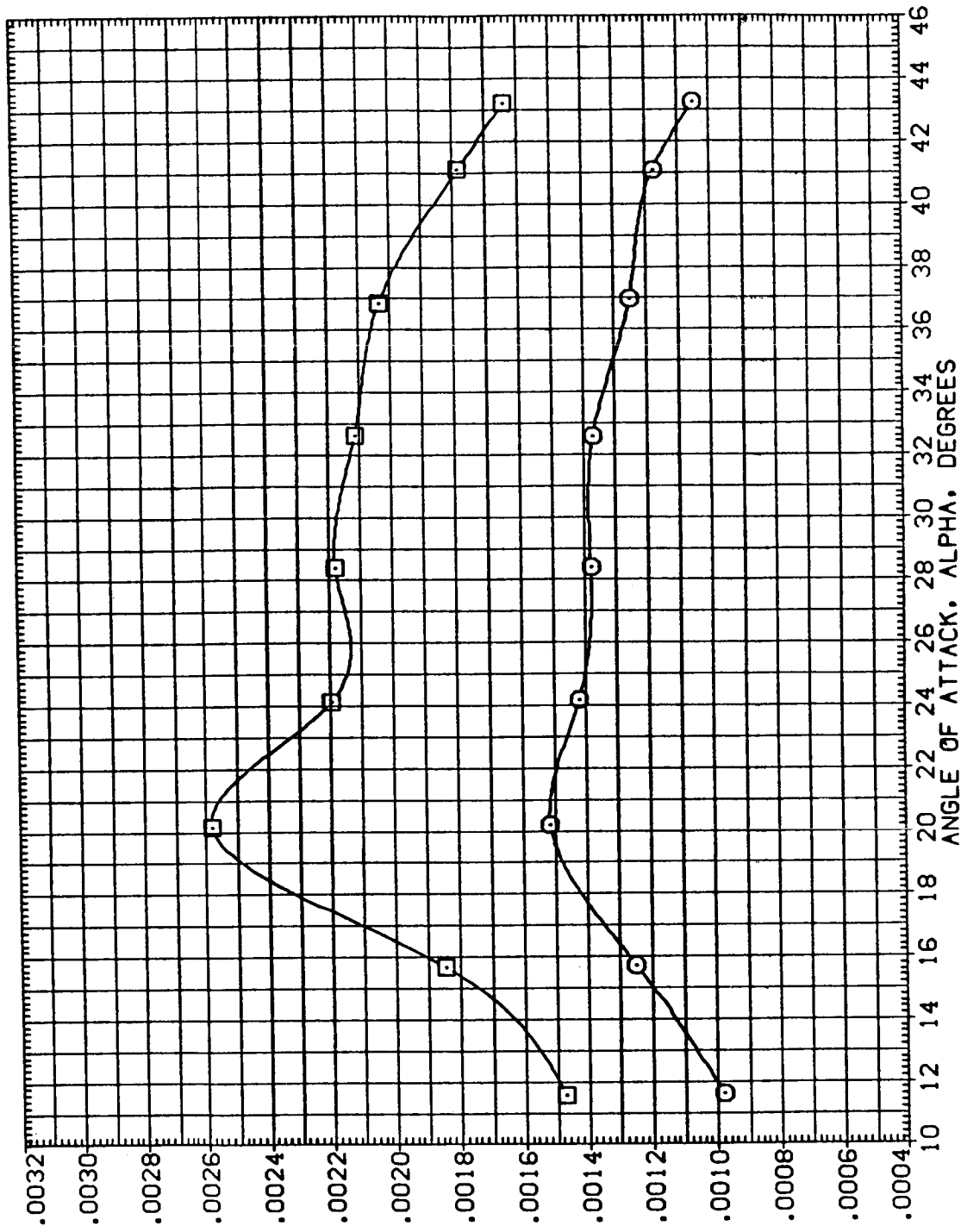


FIG. 5 LONGITUDINAL SPEEDBRAKE EFFECTIVENESS, WITH AND W/O STING AND NOZZLES.  
 (A)MACH = 5.25  
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DATA SET SYMBOL (CE0013)  
 (CE0017)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-N7+H14-N24+DUMMY STING)

BETA .000  
 ELEVON .000  
 BOFLAP -11.700  
 SPOBRK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

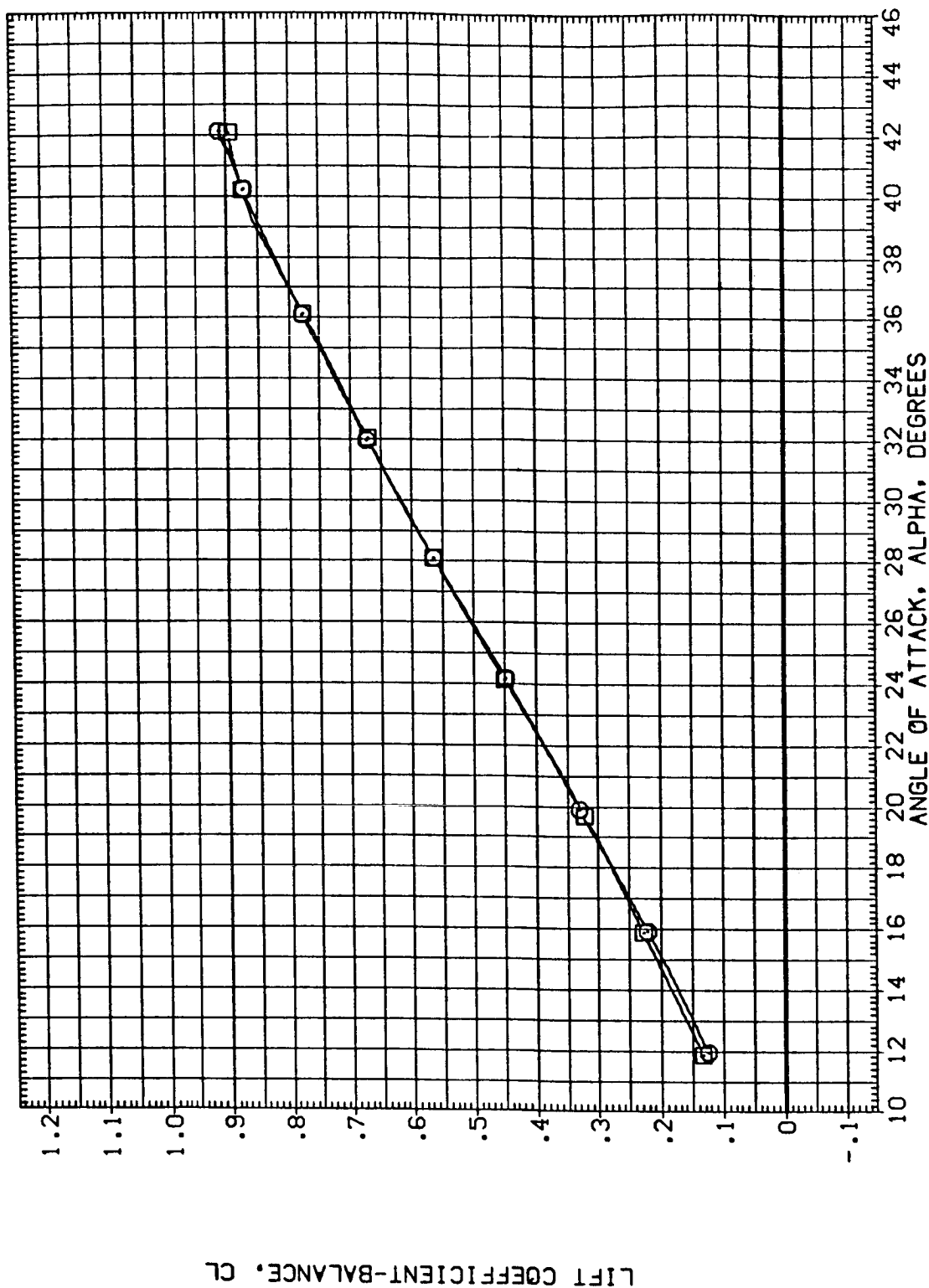


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CEQ013)	AMES 3.5-190 GAS8 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEQ017)	AMES 3.5-190 GAS8 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

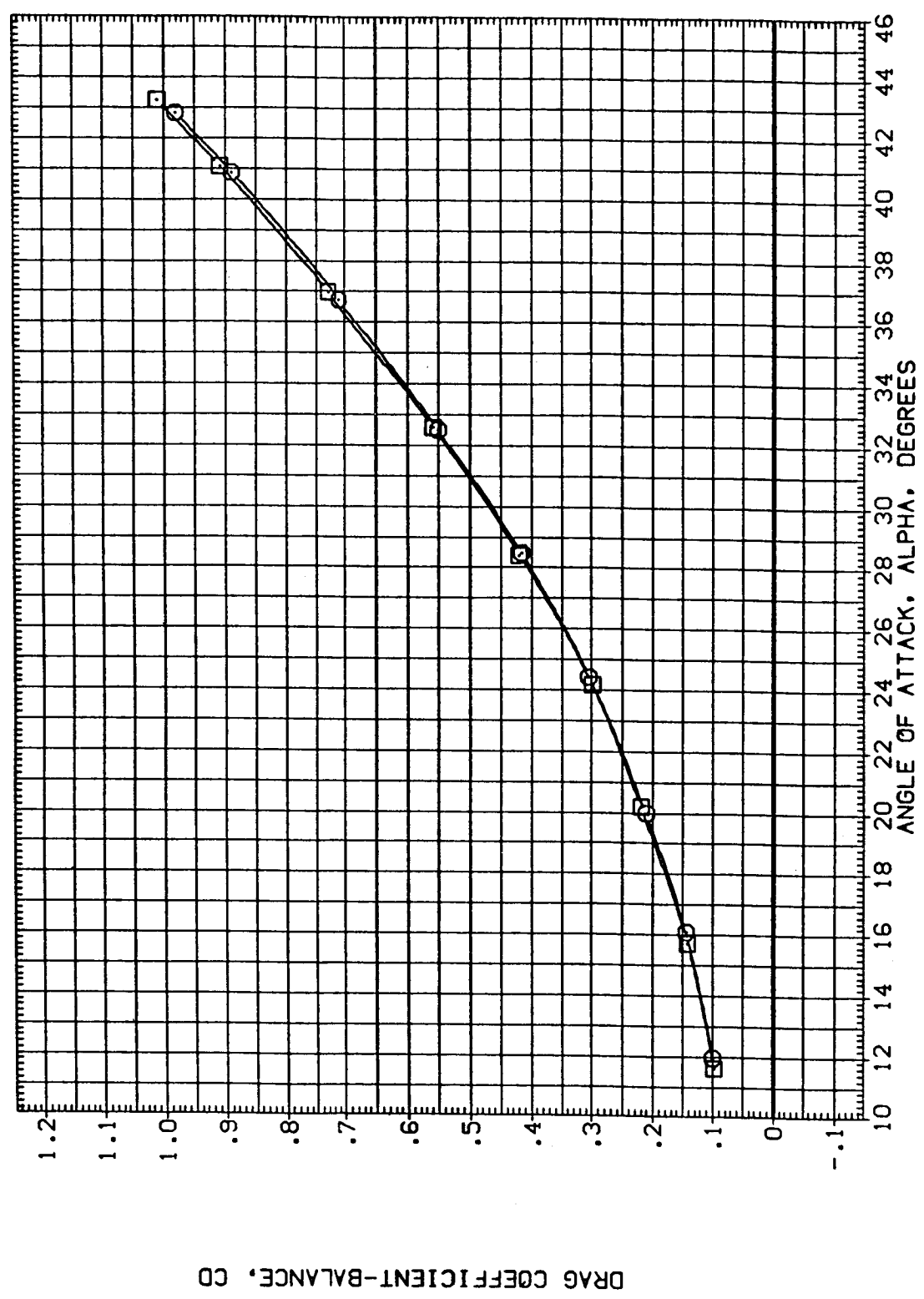


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(M)MACH = 5.25

DATA SET SYMBOL (CE0013) (CE0017)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-N24+JUNNY STING)  
 AMES 3.5-190 0A98 (011-M7-M14-N24+JUNNY STING)

BETA .000  
 ELEVON .000  
 BOFLAP -11.700  
 SP0BRK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6900 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

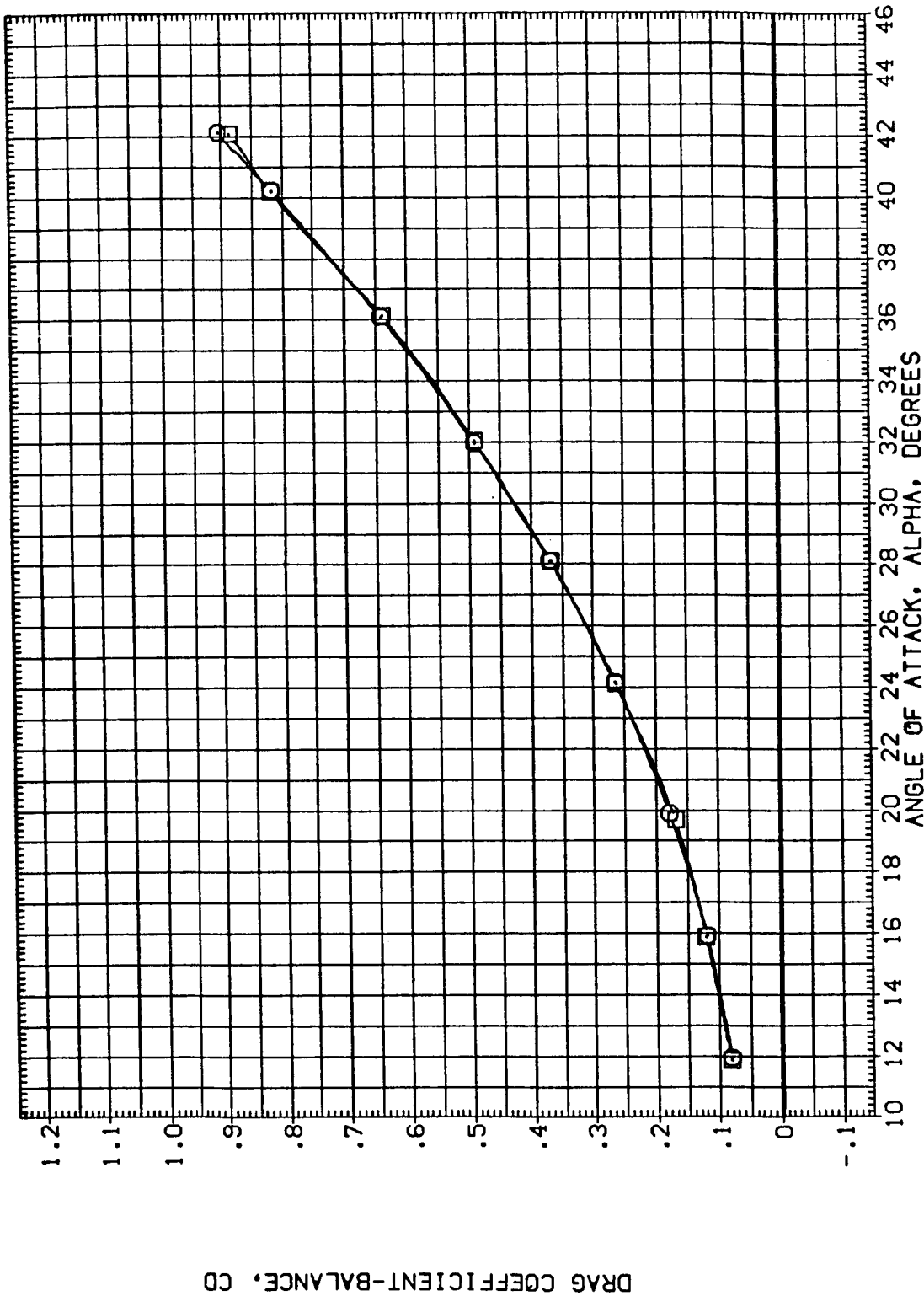


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CEQ013)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEQ017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

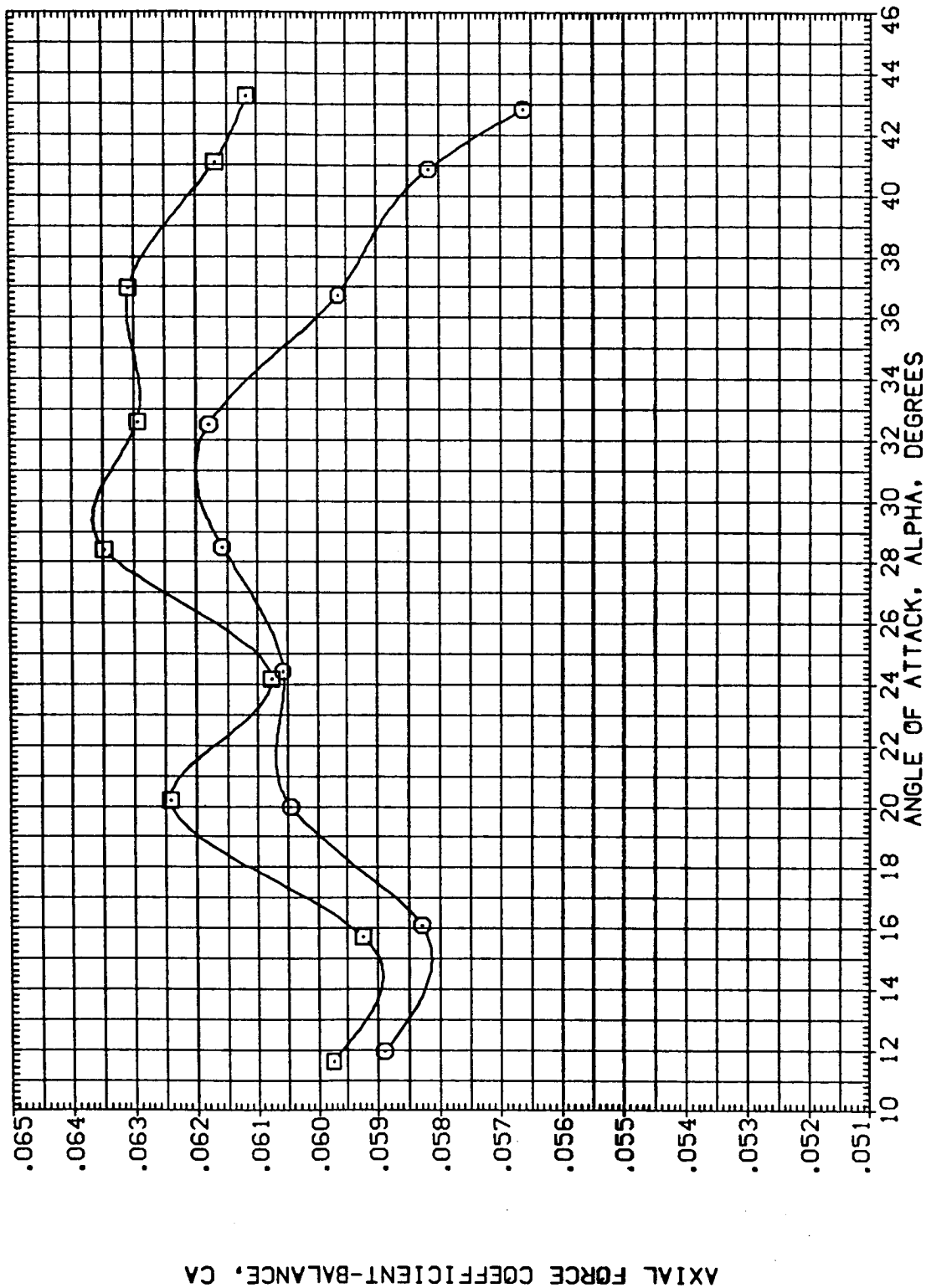


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CA/MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0013)	AMES 3.5-190 DAY8 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0017)	AMES 3.5-190 DAY8 (011-M7+H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

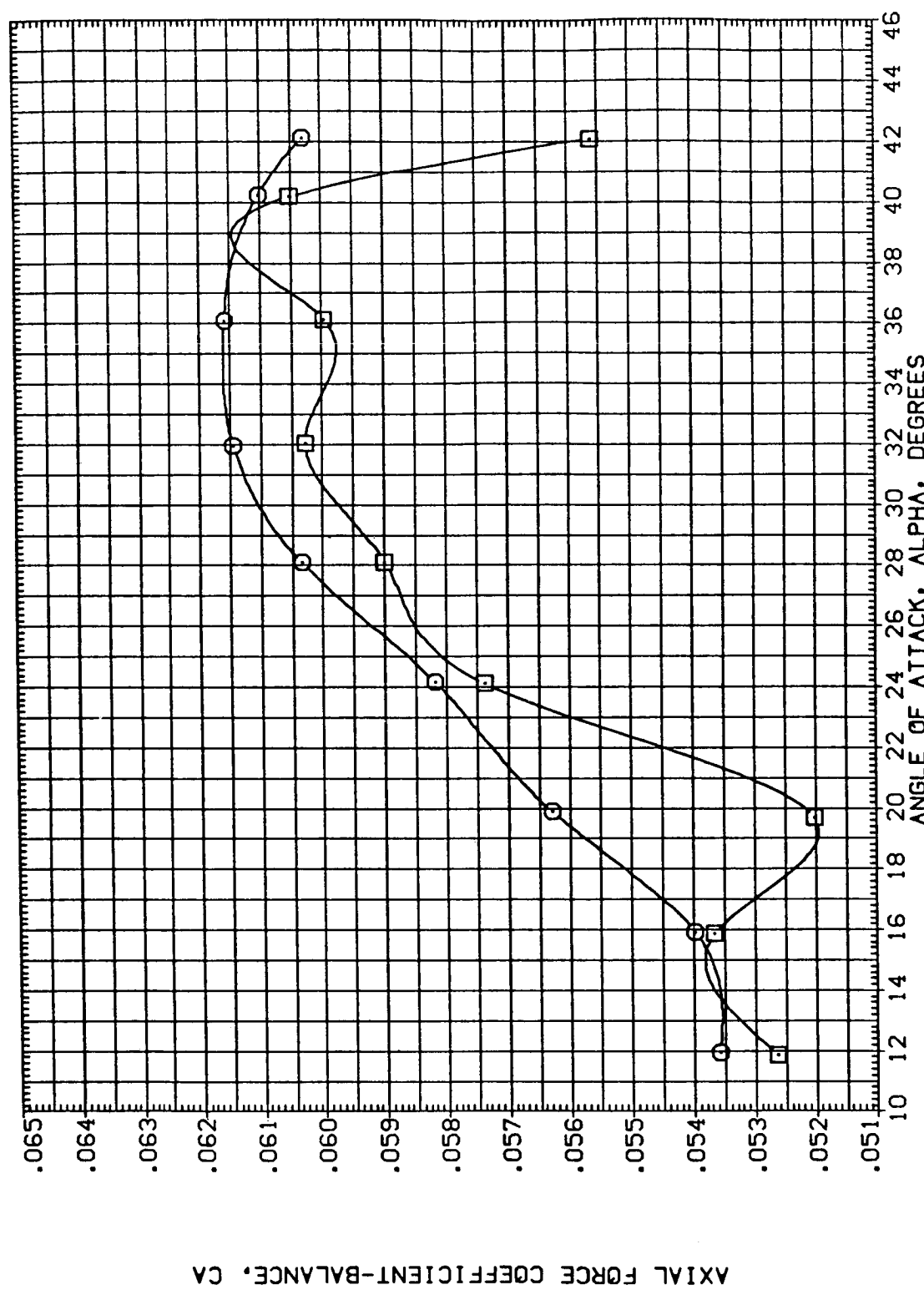


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.  
(B)MACH = 10.27

DATA SET SYMBOL (CE0013)  
 (CE0017)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 OA98 (011-N24+DUMMY STING)  
 AMES 3.5-190 OA98 (011-H7+H14-N24+DUMMY STING)

BETA .000  
 .000

ELEVON .000  
 .000

BOFLAP -11.700  
 -11.700

SPOBRK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWO

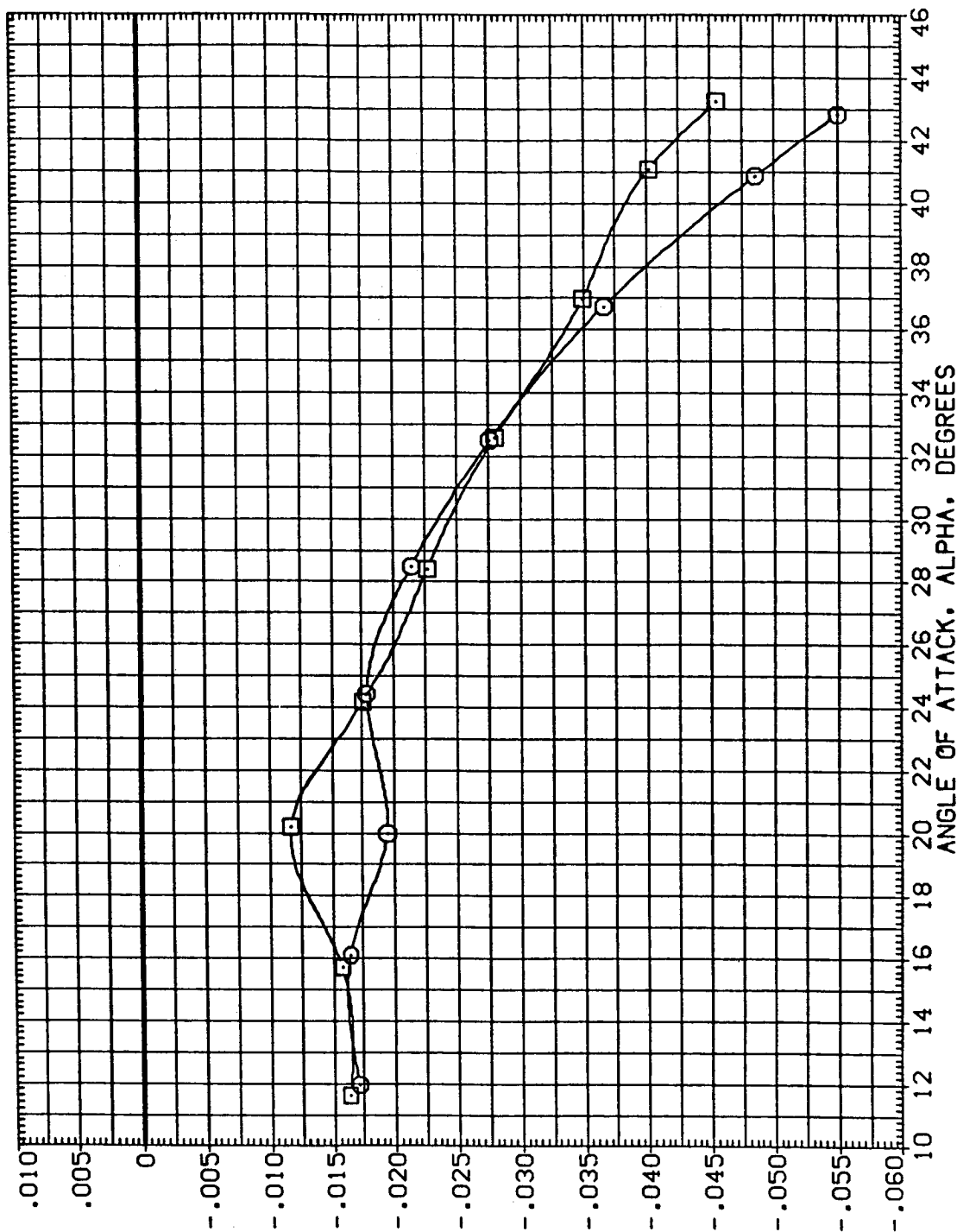


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

DATA SET SYMBOL

CONFIGURATION DESCRIPTION

AVES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA

ELEVON

BOFLAP

SPOBRK

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.XG  
 YMRP .0000 IN.YG  
 ZMRP 375.0000 IN.ZG  
 SCALE .0150

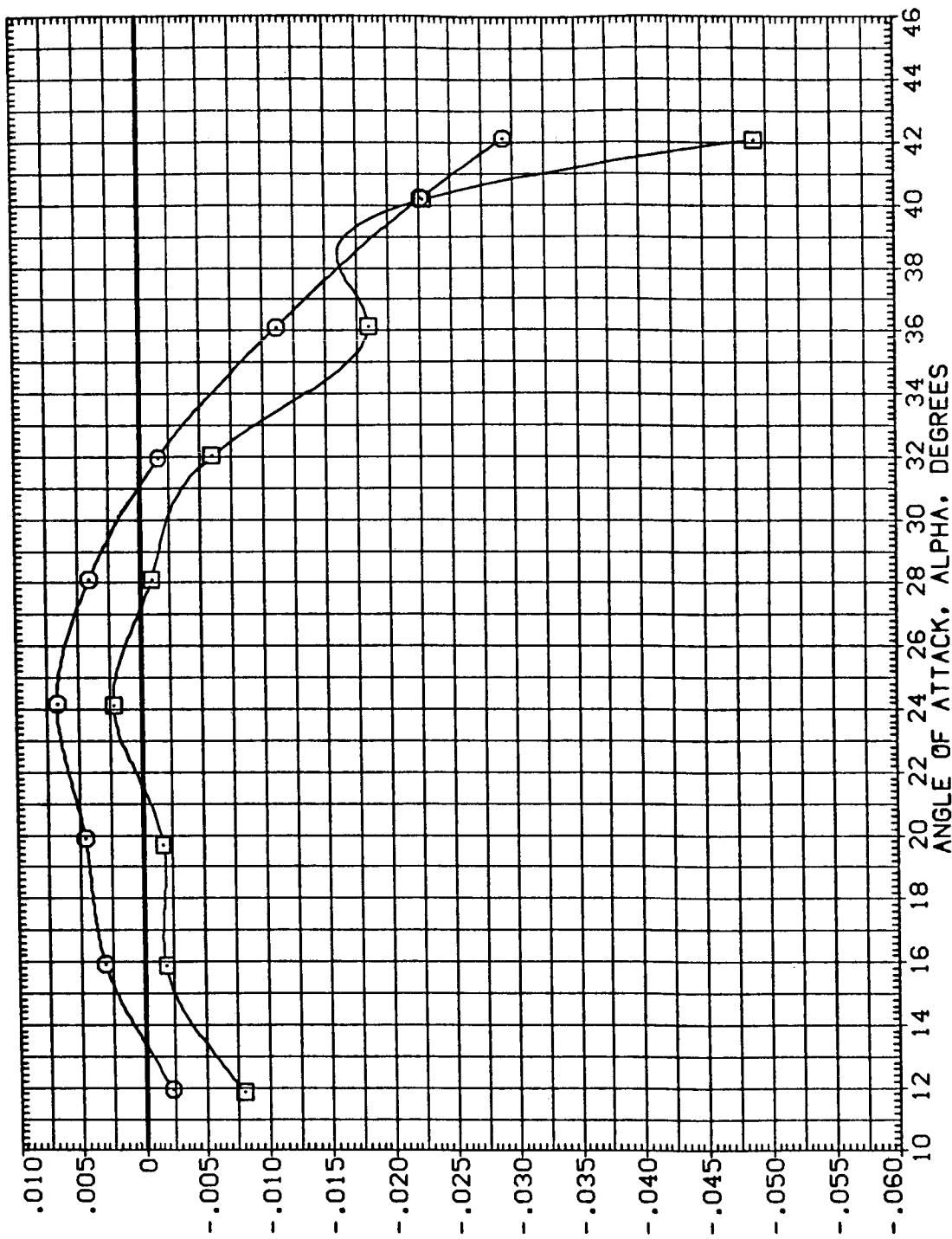


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

REFERENCE INFORMATION	
	SQ.FT.
SREF	2690.0000
LREF	474.8000
BREF	936.6800
XMRP	1076.7000
YMRP	.0000
ZMRP	375.0000
SCALE	.0150

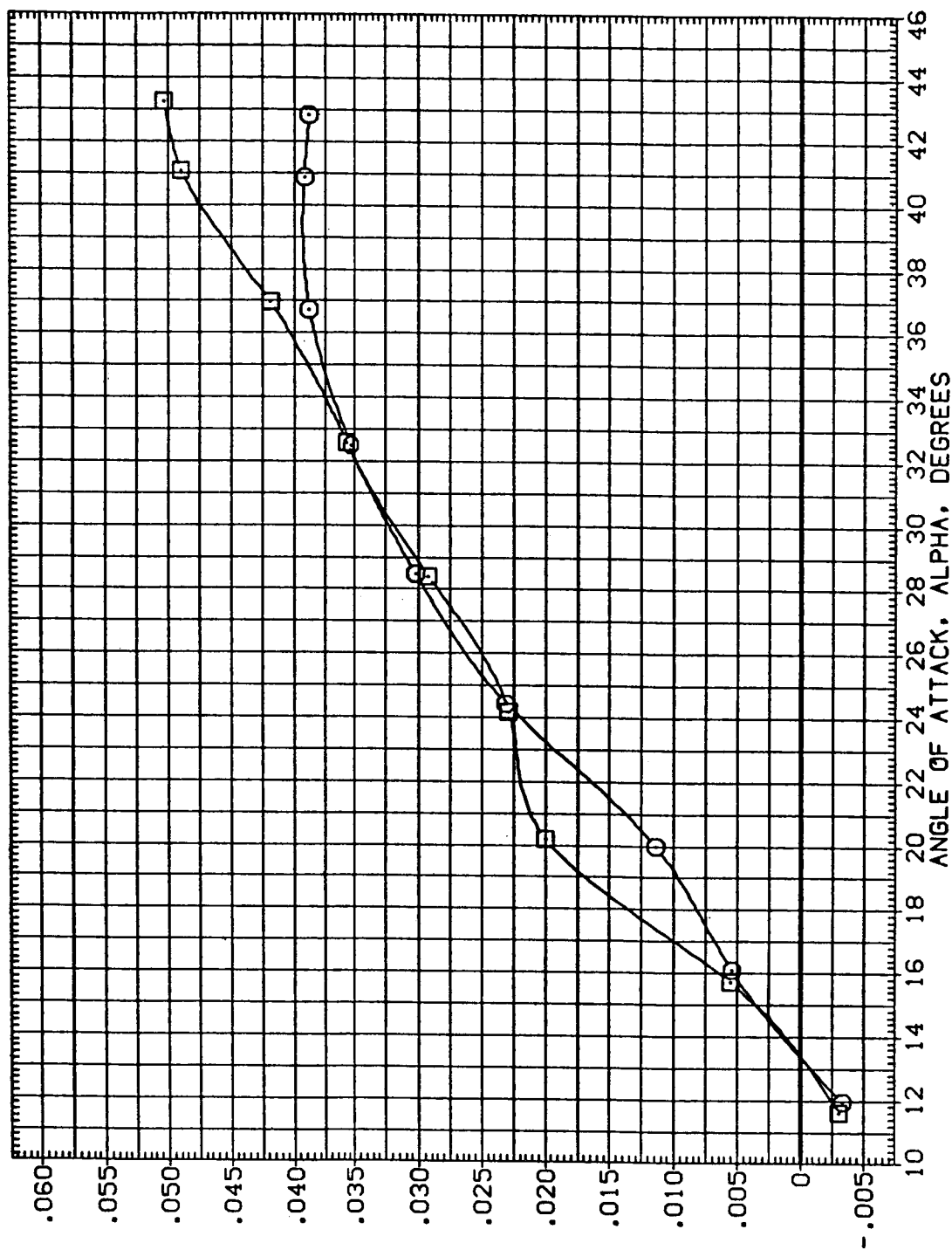


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

**CAMACH = 5.25**

DATA SET SYMBOL: (CE0013)  
(CE0017)

CONFIGURATION DESCRIPTION:  
AVES 3.5-190 0A98 (011-N24+DUMMY STING)  
AVES 3.5-190 0A98 (011-H7-H14-N24+DUMMY STING)

BETA: .000  
.000

ELEVON: .000  
.000

BOFLAP: -11.700  
-11.700

SPOBRK: 55.000  
55.000

REFERENCE INFORMATION:  
SREF: 2690.0000 SQ. FT.  
LREF: 474.8000 IN.  
BREF: 936.6800 IN.  
XMRP: 1076.7000 IN. X0  
YMRP: .0000 IN. Y0  
ZMRP: 375.0000 IN. Z0  
SCALE: .0150

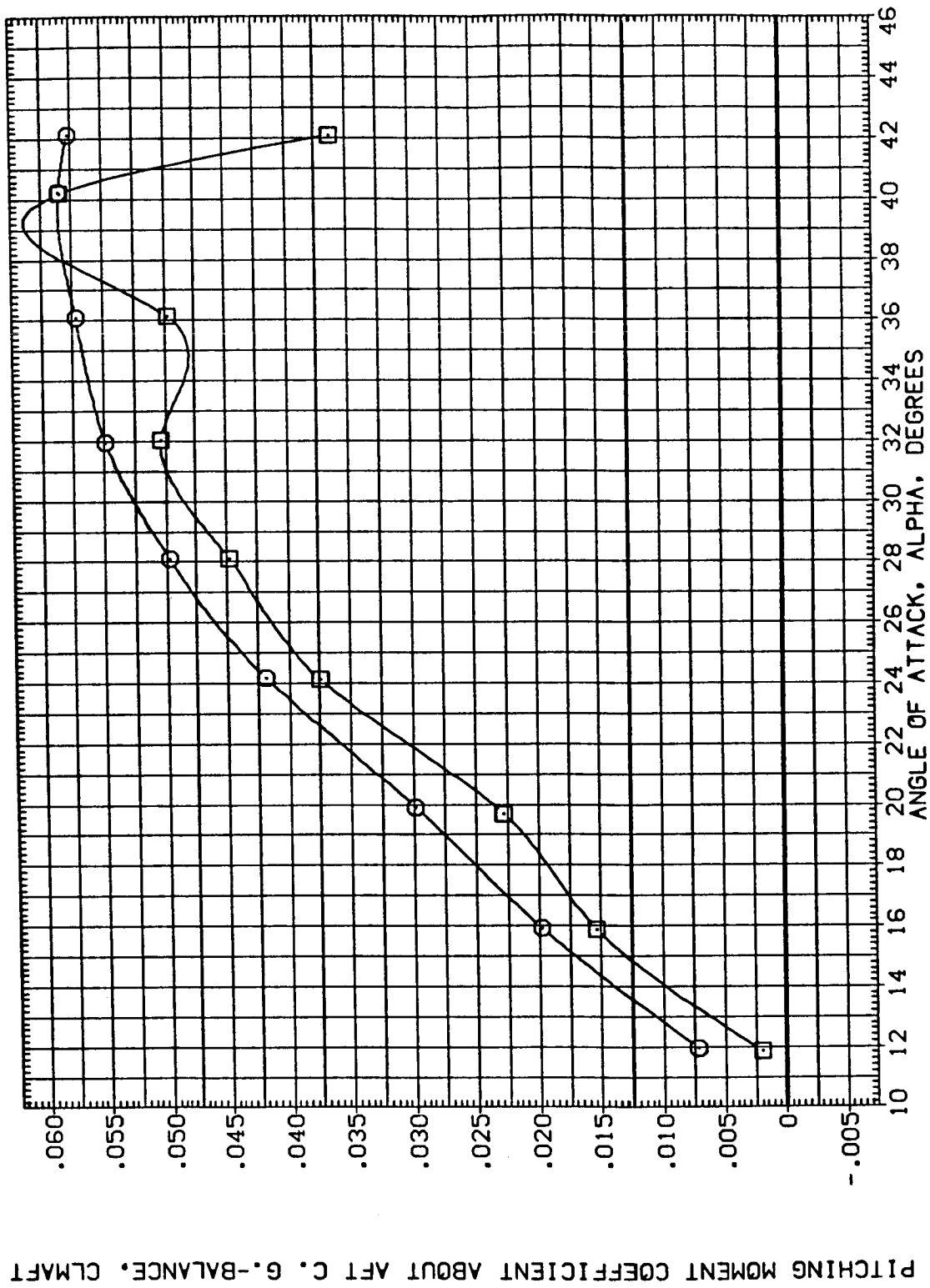


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL  
(CE0013)  
(CE0017)

CONFIGURATION DESCRIPTION  
AVES 3.5-190 0A98 (011-N24+DUMMY STING)  
AVES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPDRBK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

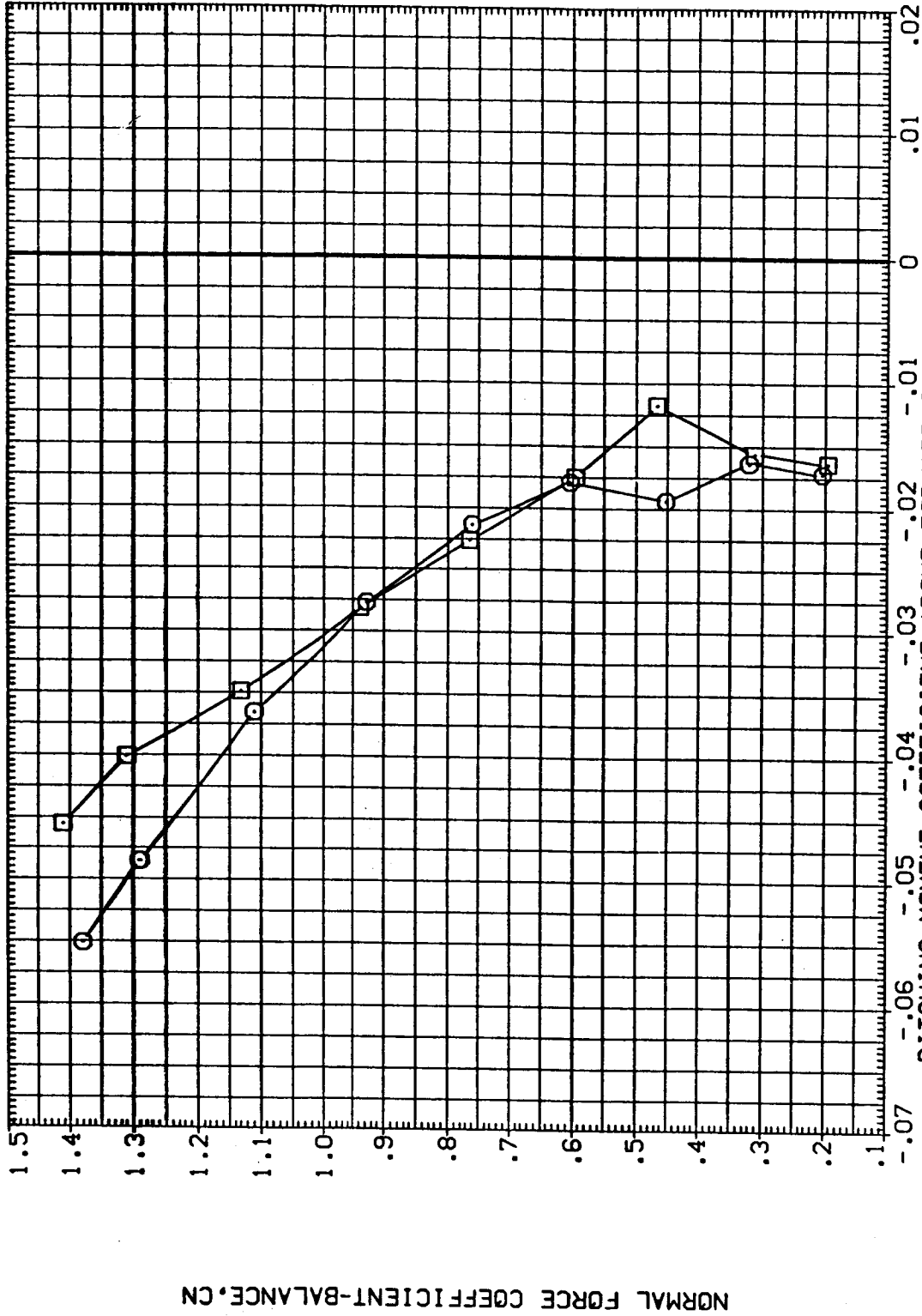


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVATION	BOFLAP	SPOBRK	REFERENCE	INFORMATION
(CE0013)	AVES 3.5-190 DASH (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2650.0000	SO.FT.
(CE0017)	AVES 3.5-190 DASH (011-H7+H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 BREF 936.6800 XMRP 1076.7000 YMRP .0000 ZMRP .0000 SCALE .0150	IN. IN. IN.X0 IN.Y0 IN.Z0

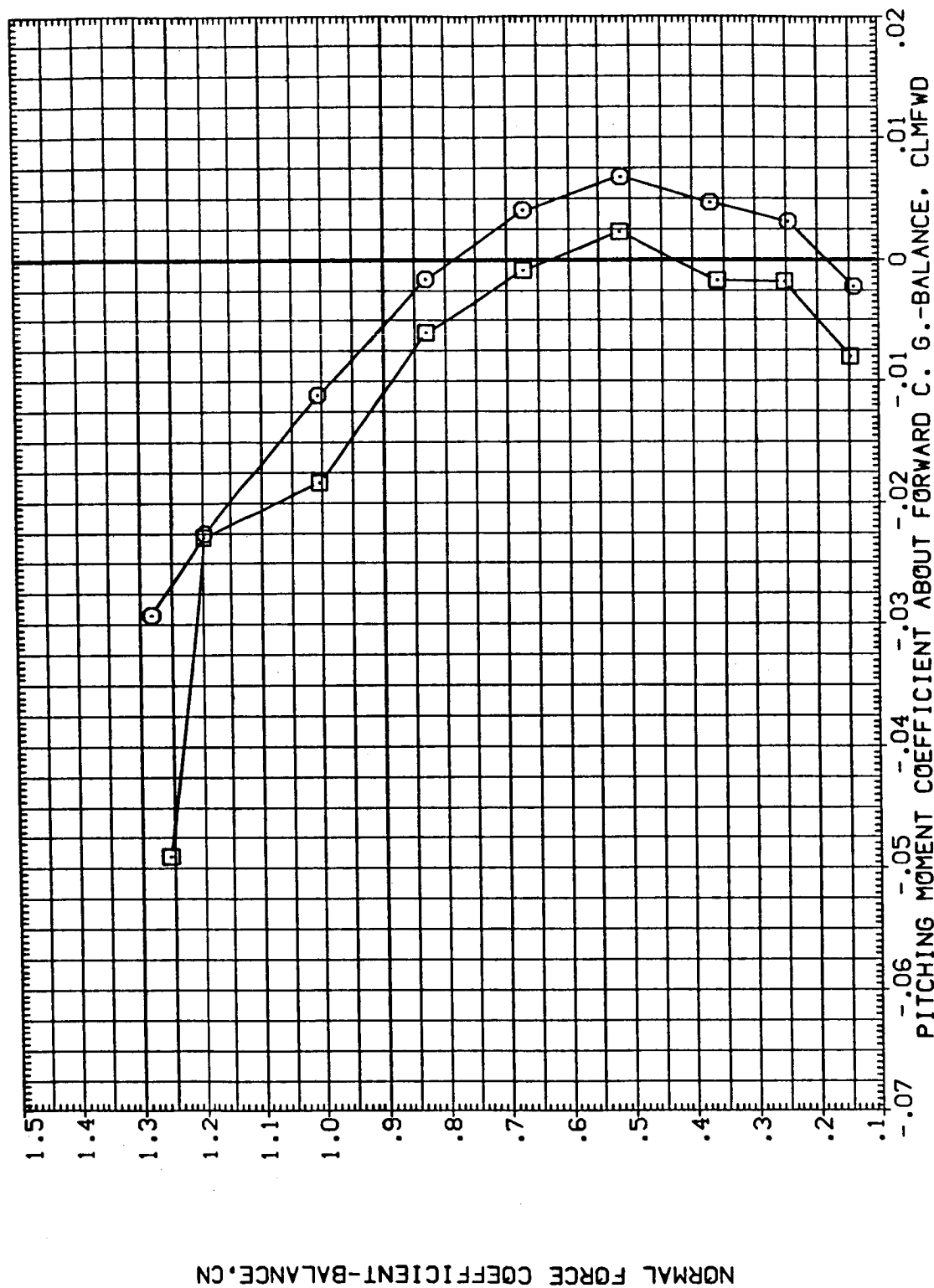


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

```
(B)MACH = 10.27
```



DATA SET SYMBOL	CONFIGURATION	DESCRIPTION
(CE0013)	AVES 3-5-190 0A98	(011-N24+DUMPY STING)
(CE0017)	AVES 3-5-190 0A98	(011-H7+M14-N24+DUMPY STING)

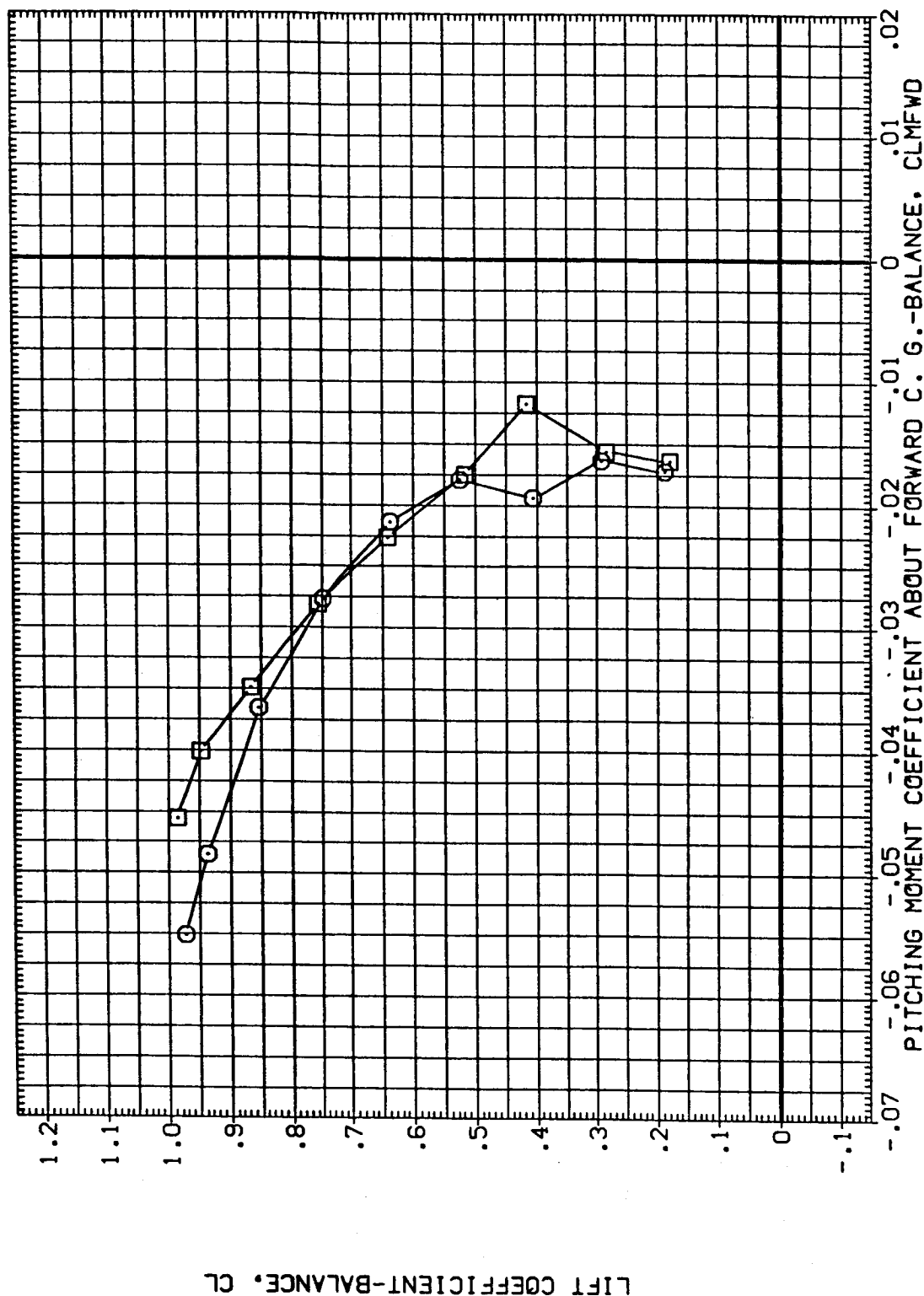


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

**(A)MACH = 5.25**

DATA SET SYMBOL  
(CE0013)  
(CE0017)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 GA98 (011-N24+DUMMY STING)  
AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPDBRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

LIFT COEFFICIENT-BALANCE, CL

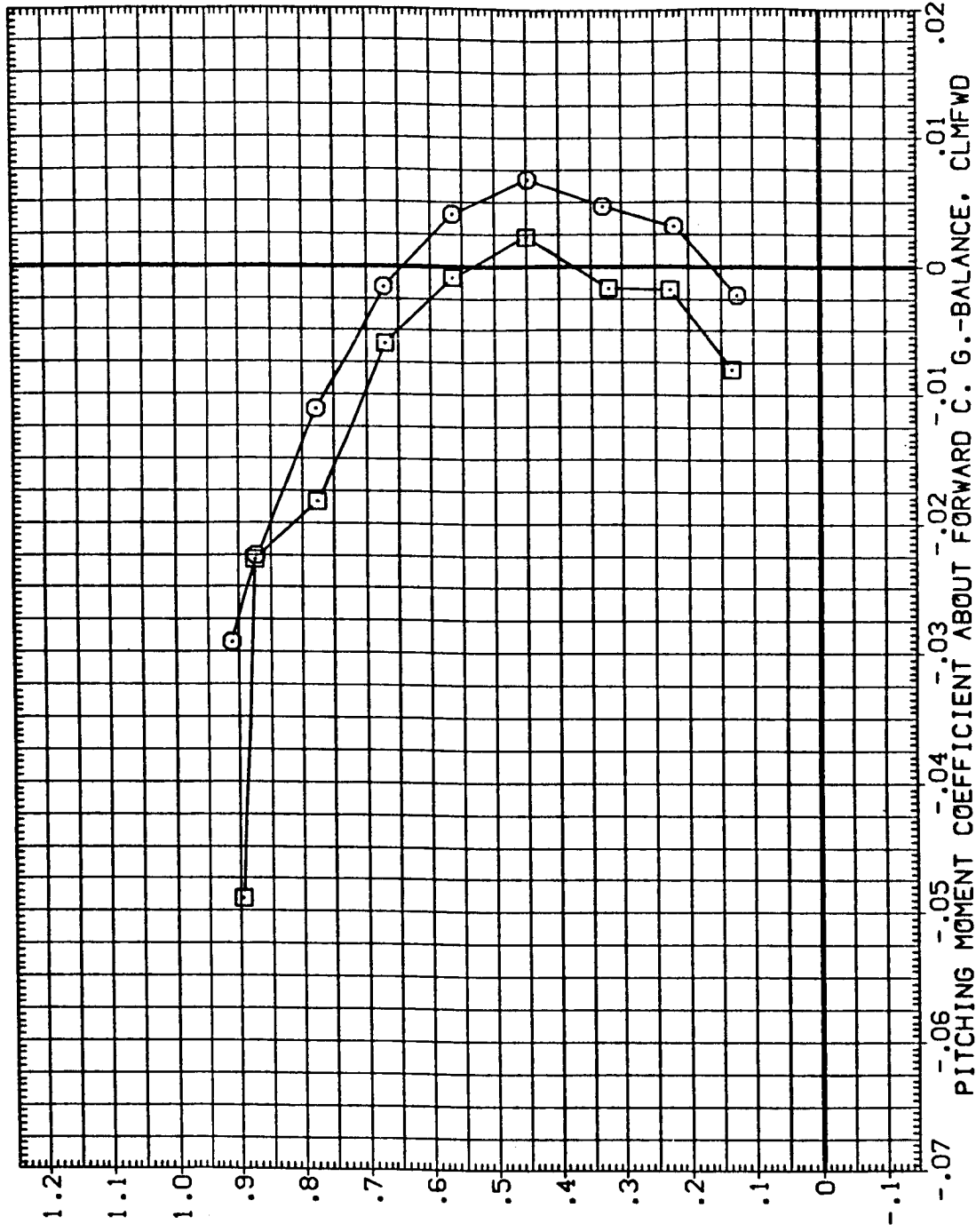


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (CE0012) (CE0017)

CONFIGURATION DESCRIPTION  
 AVES 3.5-190 GA98 (011-N24+DUMMY STING)  
 AVES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 55.000 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

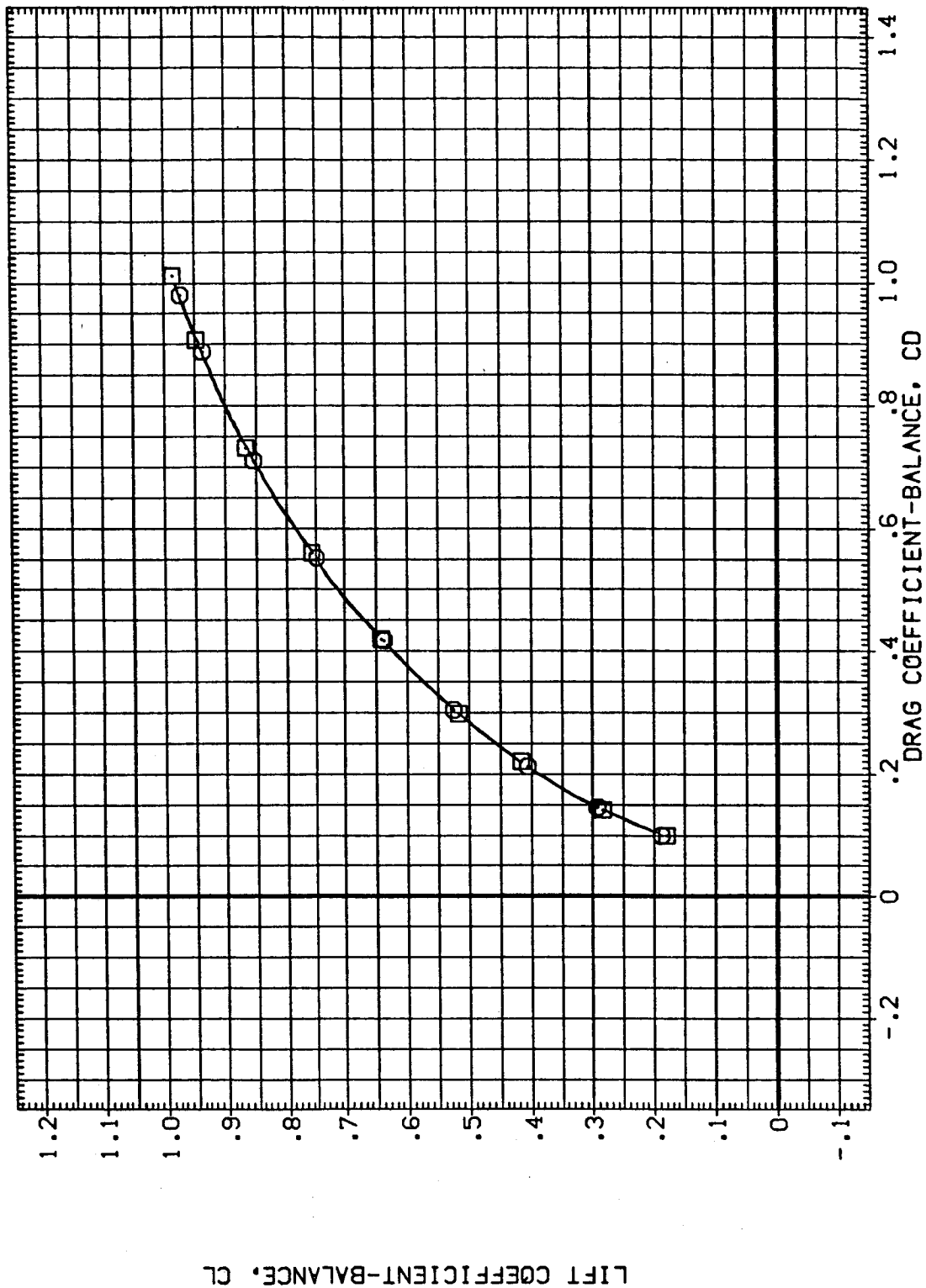


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL: (CE0013) (CE0017)

CONFIGURATION DESCRIPTION: AMES 3.5-190 OAS8 (011-N24+DUMMY STING) AMES 3.5-190 OAS8 (011-N7+M14-N24+DUMMY STING)

BETA: .000 .000

ELEVON: .000 .000

BOFLAP: -11.700 -11.700

SPDBRK: 55.000 55.000

REFERENCE INFORMATION:

SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN.X0
YMRP	.0000	IN.Y0
ZMRP	375.0000	IN.Z0
SCALE	.0150	

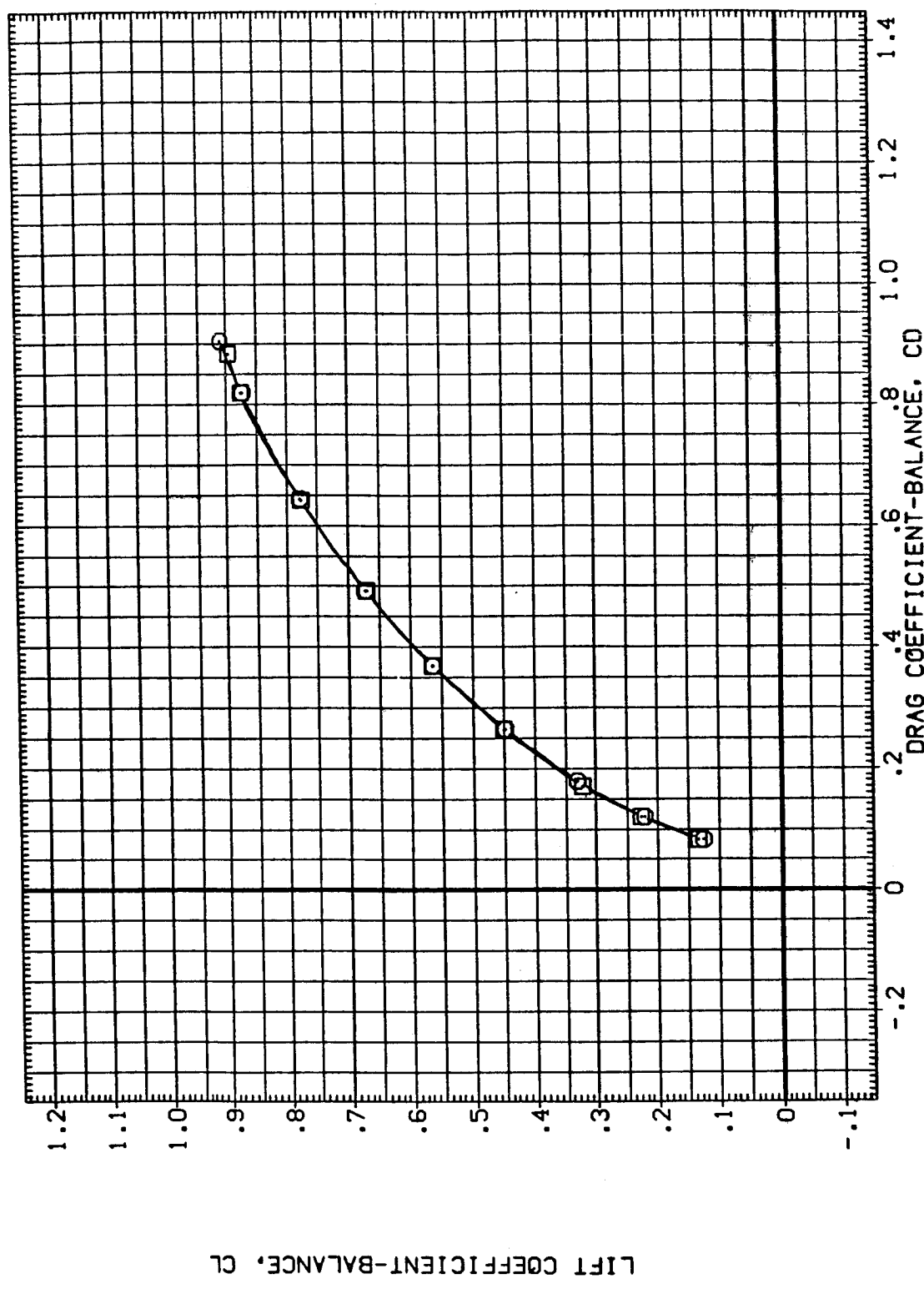


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0013)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0017)	AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

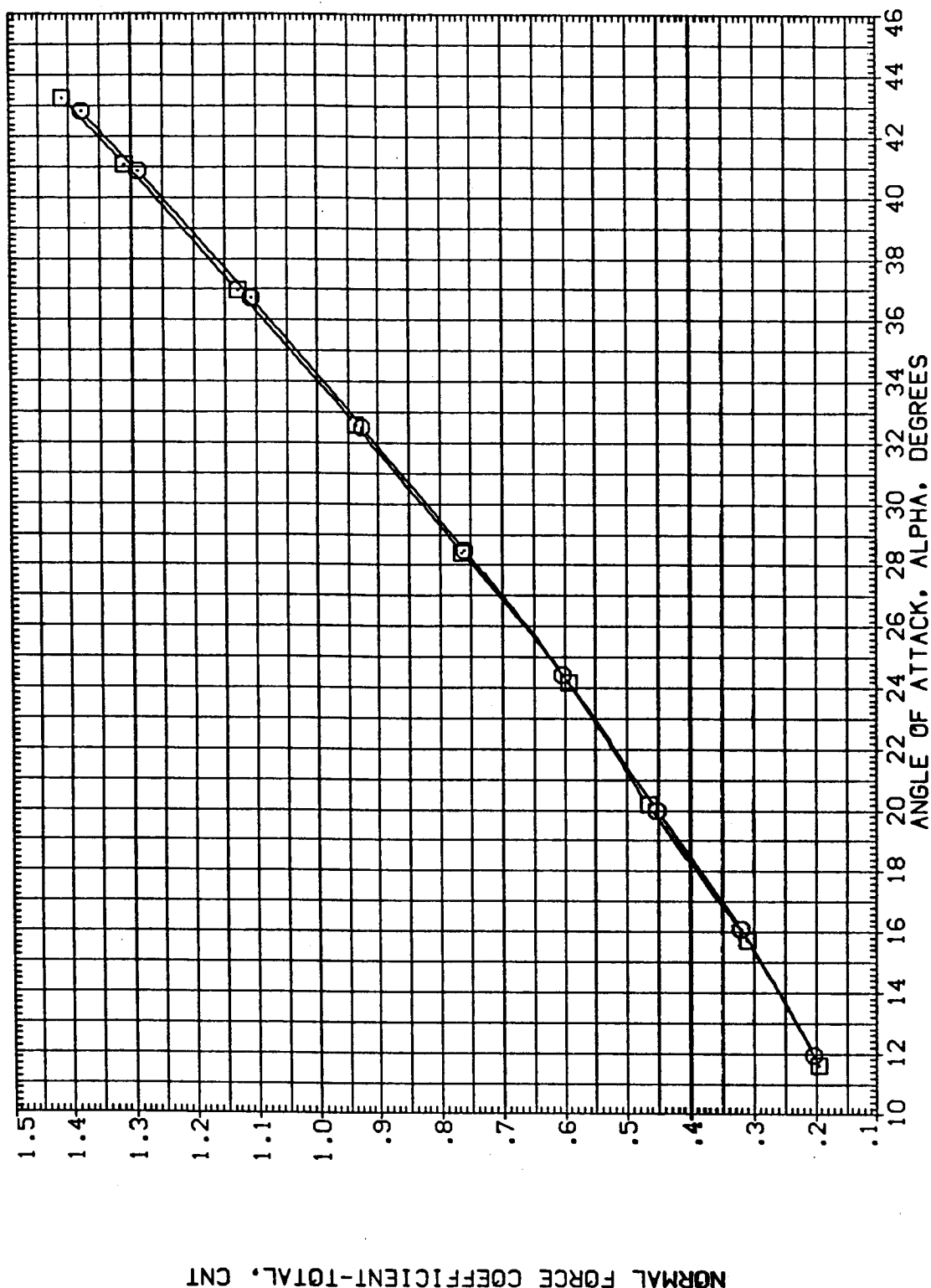


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL  
(EE0013)  
(EE0017)

CONFIGURATION DESCRIPTION  
AVES 3.5-190 0A98 (011-N24+DUMMY STING)  
AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPDRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

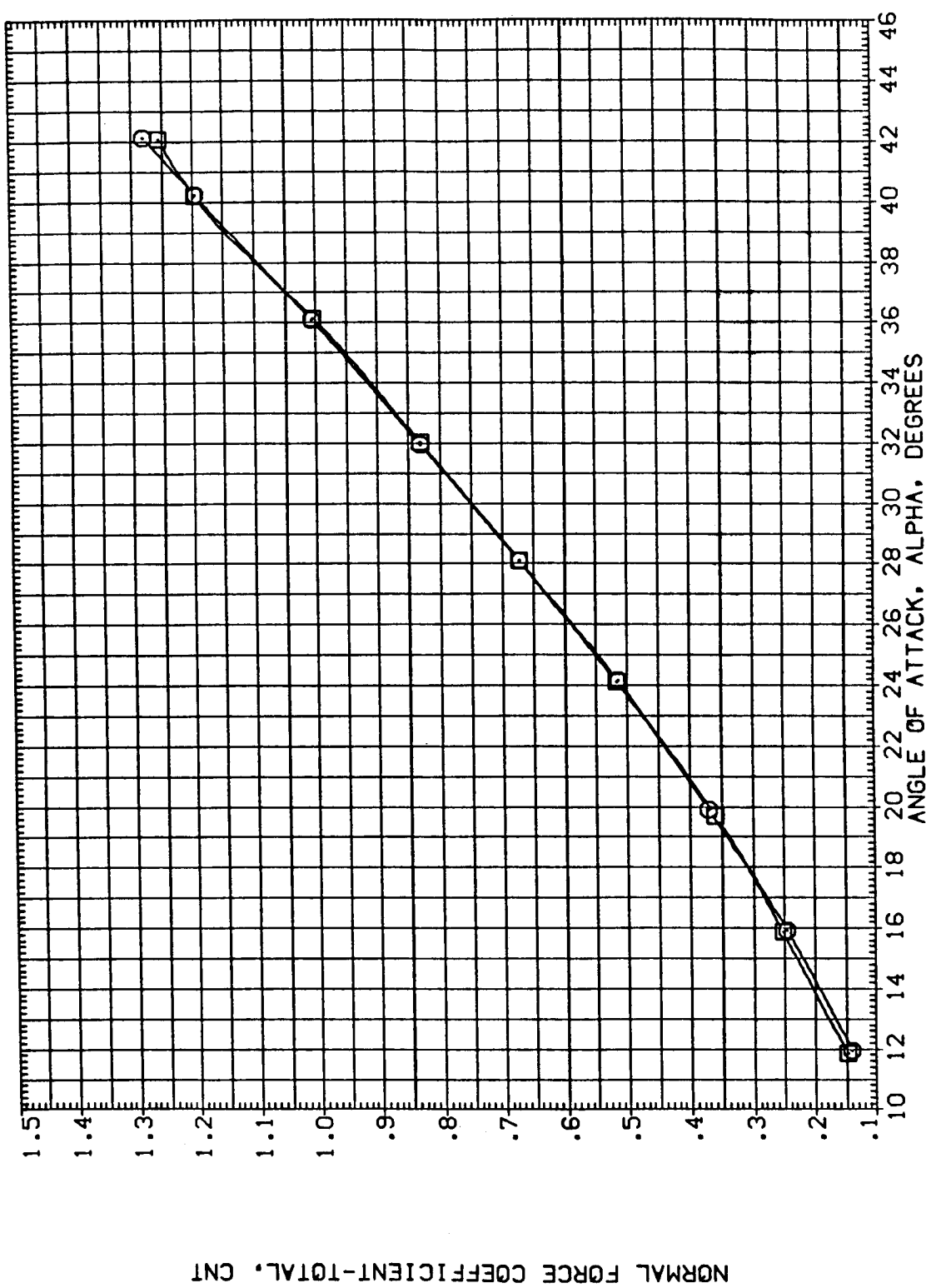


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0013)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

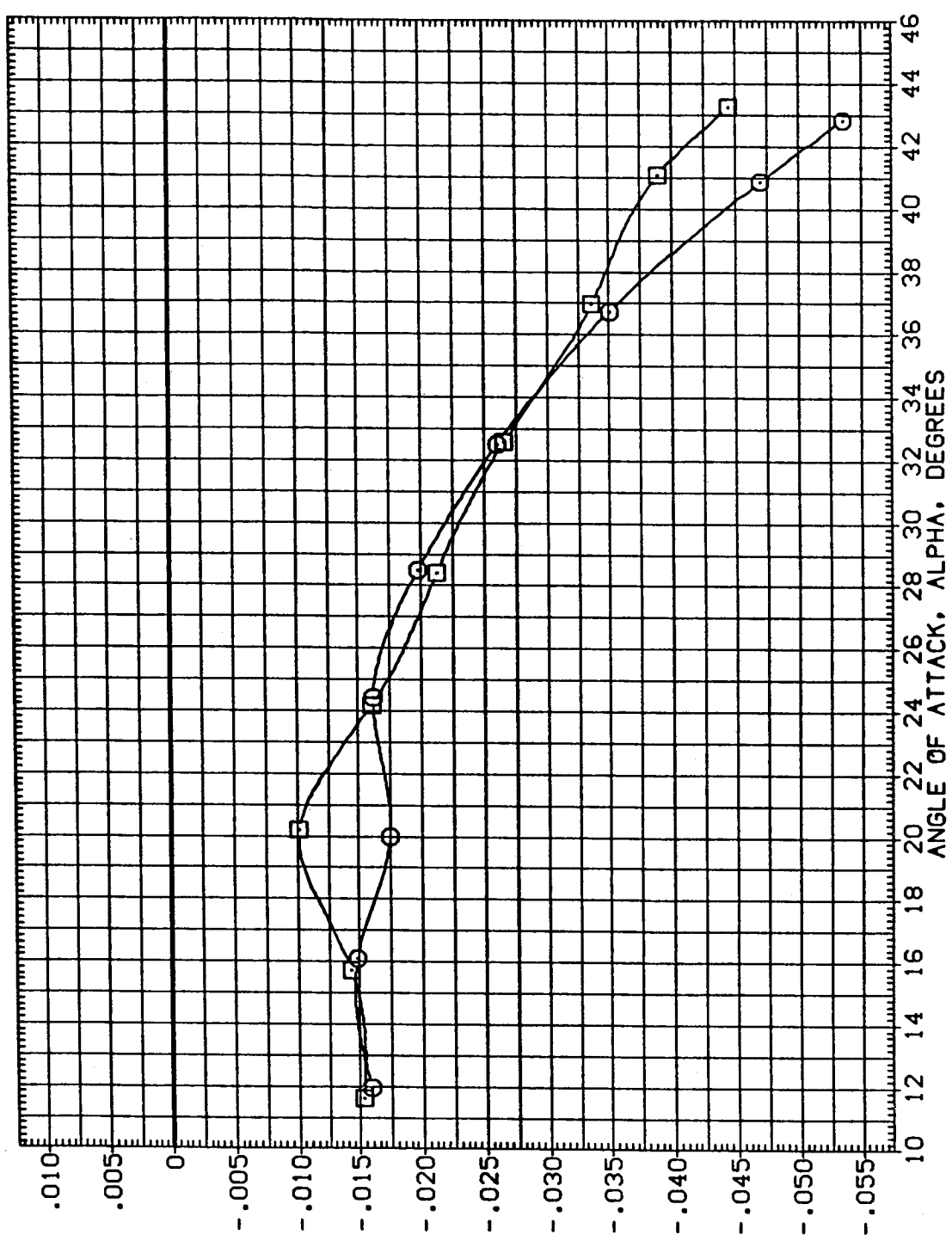


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0013) (EE0017)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 OA98 (011-N24+DUMMY STING)  
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000  
 ELEVON .000  
 BOFLAP -11.700  
 SPOBRK 55.000  
 SREF 2690.0000  
 LREF 474.8000  
 BREF 936.6800  
 XMRP 1076.7000  
 YMRP .0000  
 ZMRP 375.0000  
 SCALE .0150

REFERENCE INFORMATION  
 50.FT.  
 IN.  
 IN.  
 IN.  
 IN.  
 IN.  
 IN.  
 IN.

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

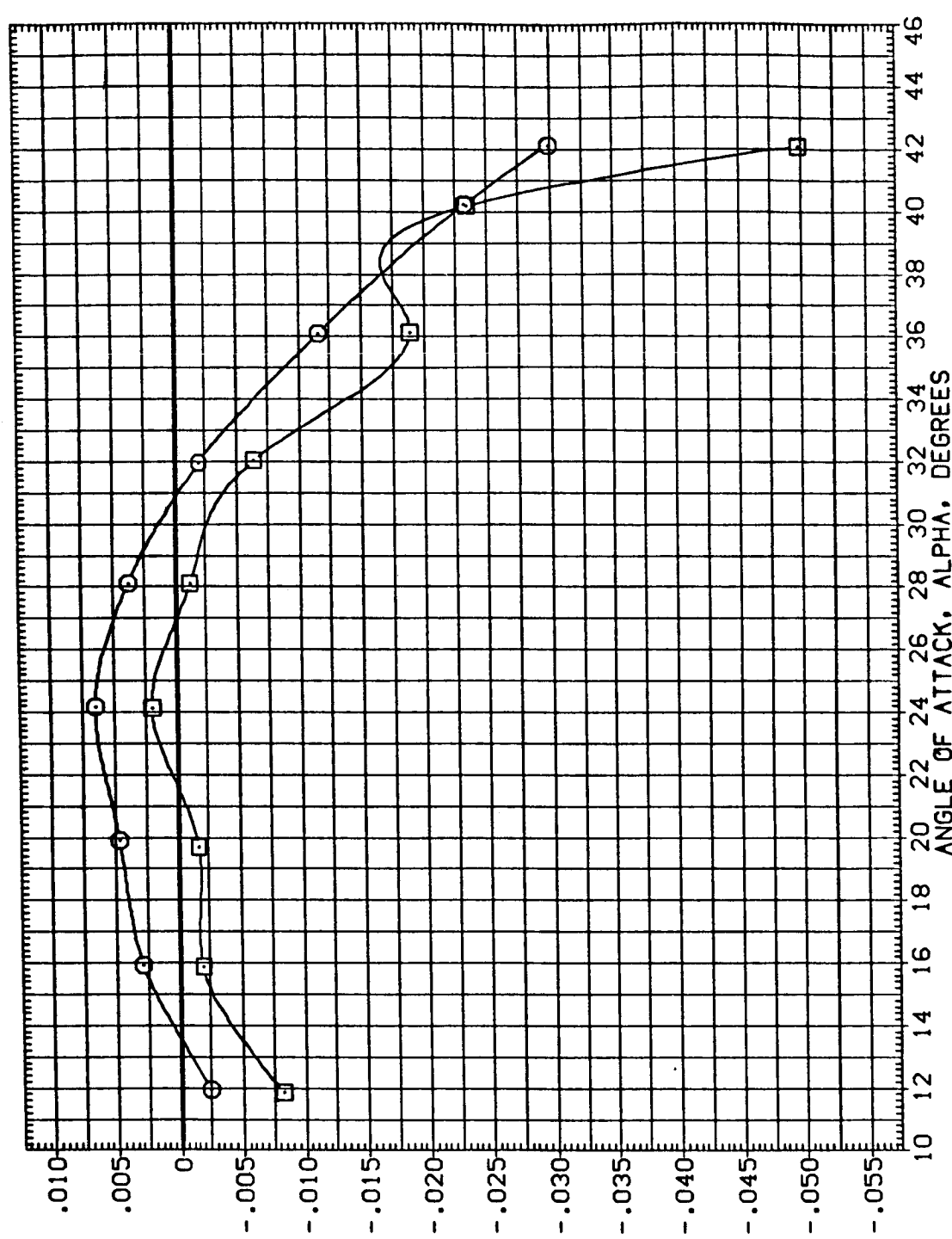


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27



DATA SET SYMBOL  
(EE0013)  
(EE0017)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
AMES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPDRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

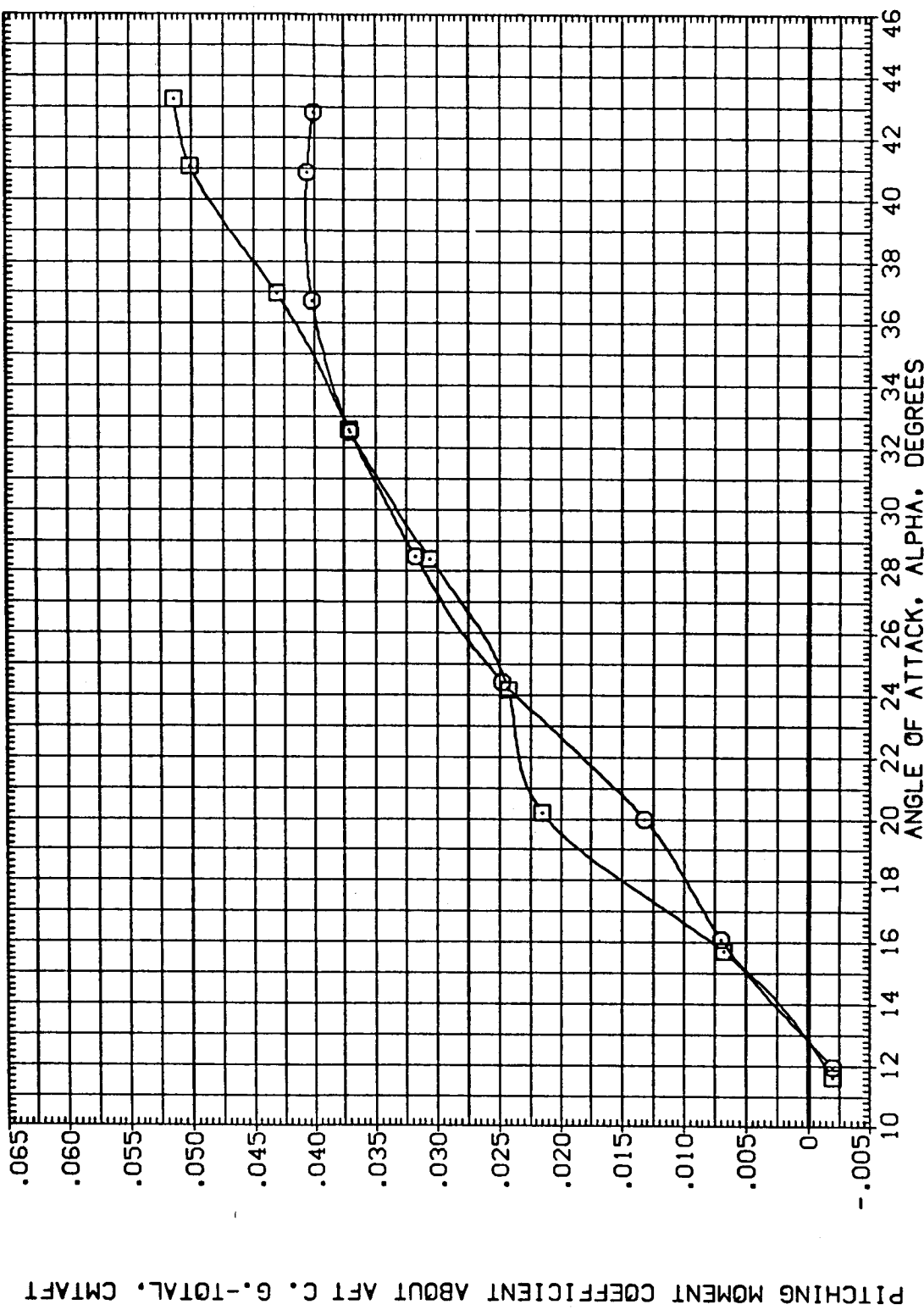


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEQ013)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 59.0000
(EEQ017)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

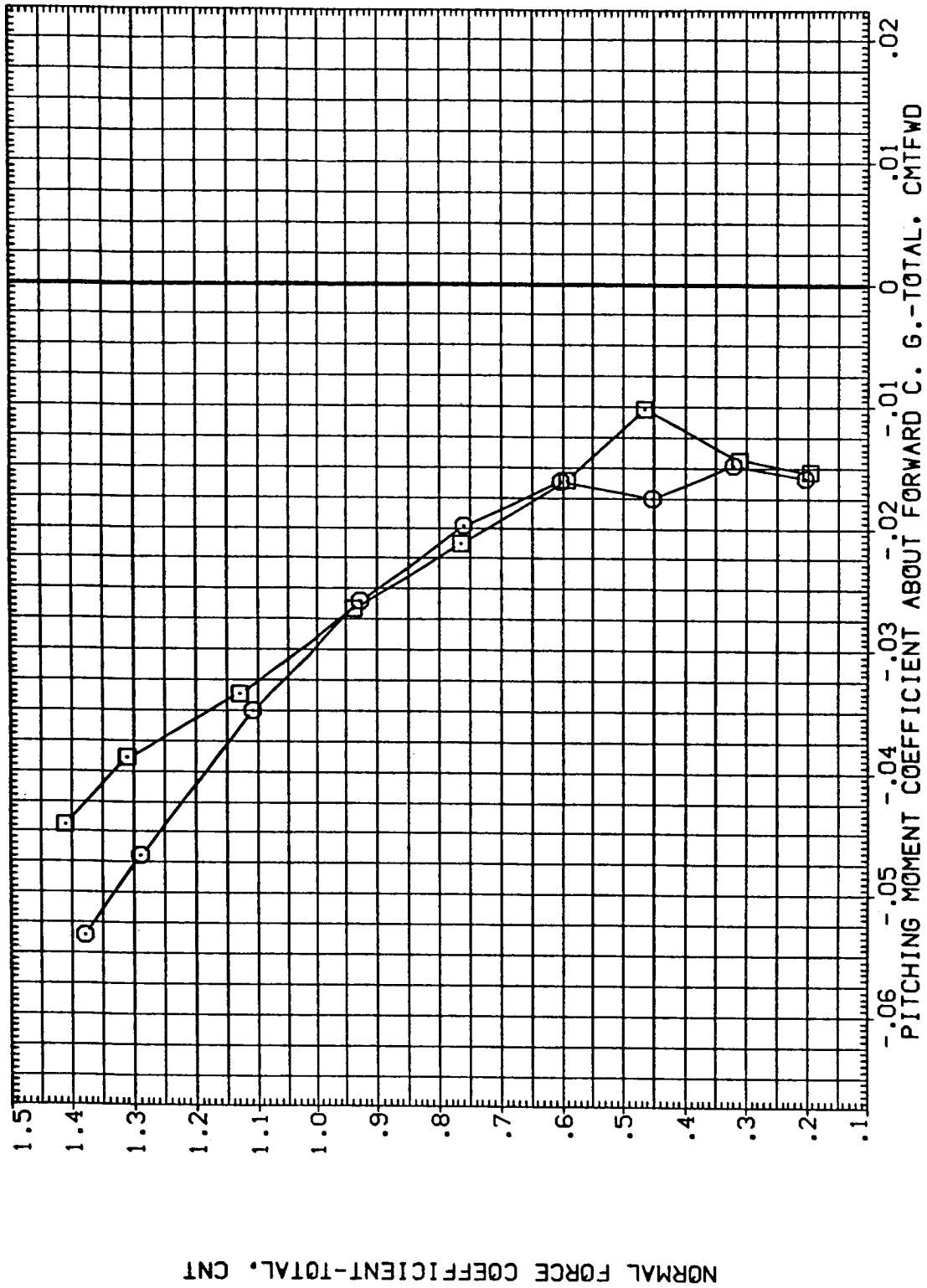


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL (EEQ013)  
 (EEQ017)

CONFIGURATION DESCRIPTION  
 APES 3.5-190 0A98 (011-N24+DUMMY STING)  
 APES 3.5-190 0A98 (011-N7+H14-N24+DUMMY STING)

BETA  
 .000  
 .000

ELEVON  
 .000  
 .000

BOFLAP  
 -11.700  
 -11.700

SPDRBK  
 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

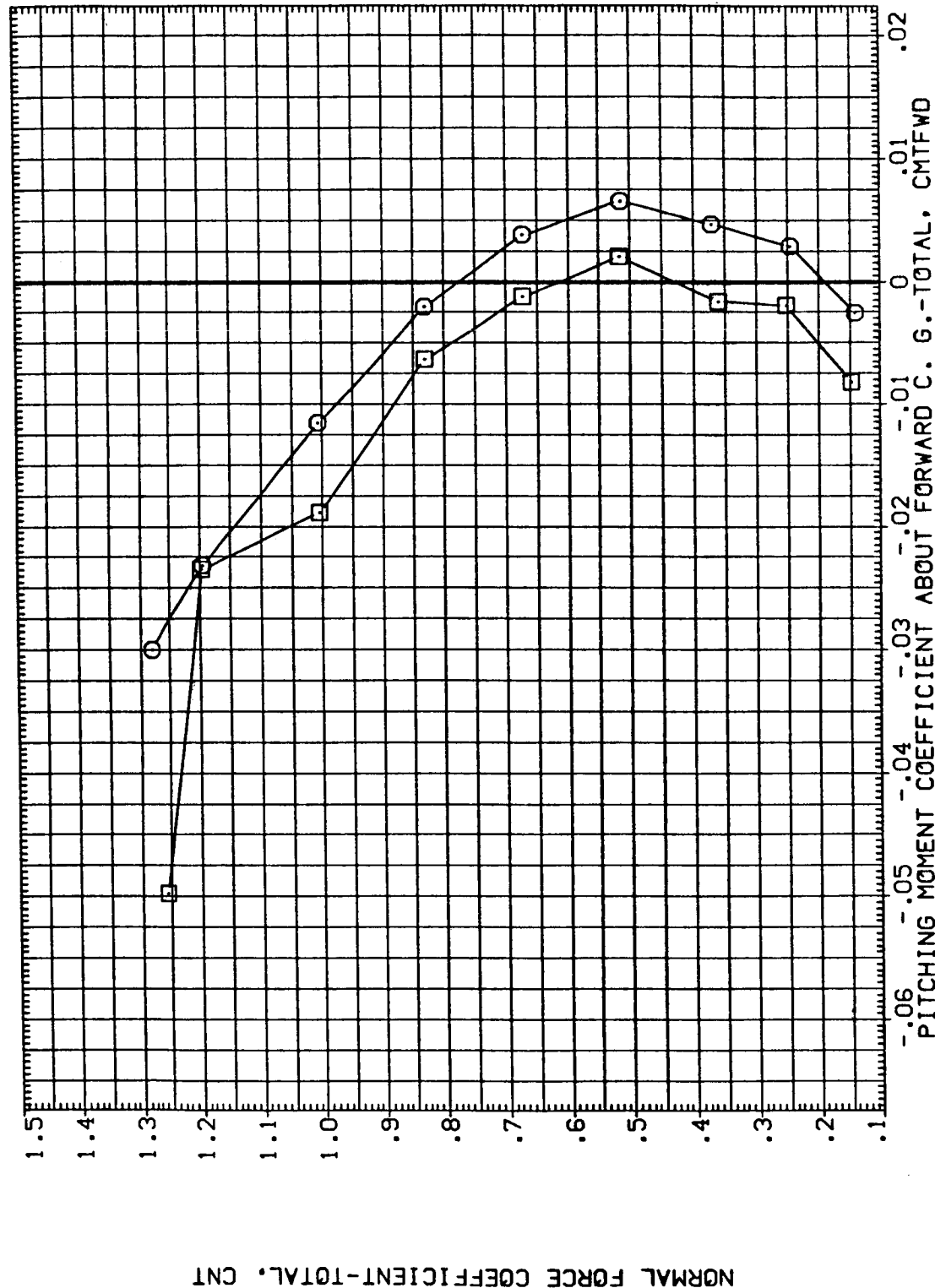


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0013)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0017)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

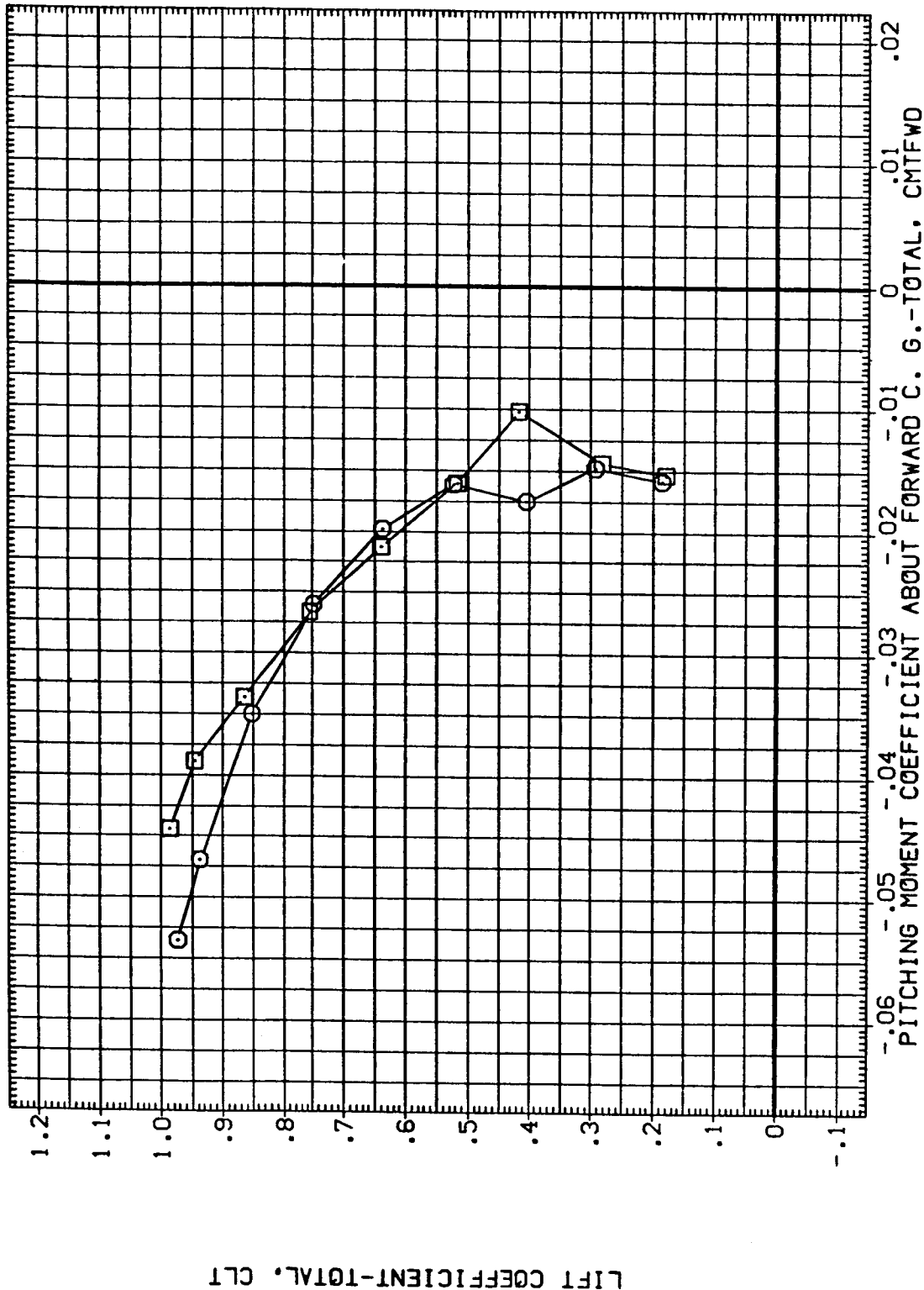


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0013)  
 (EE0017)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 GA98 (011-N24+DUMMY STING)  
 AMES 3.5-190 GA98 (011-H7+H14-N24+DUMMY STING)

BETA .000  
 ELEVON .000  
 BOFLAP -11.700  
 SPOBRK 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

LIFT COEFFICIENT-TOTAL, CLT

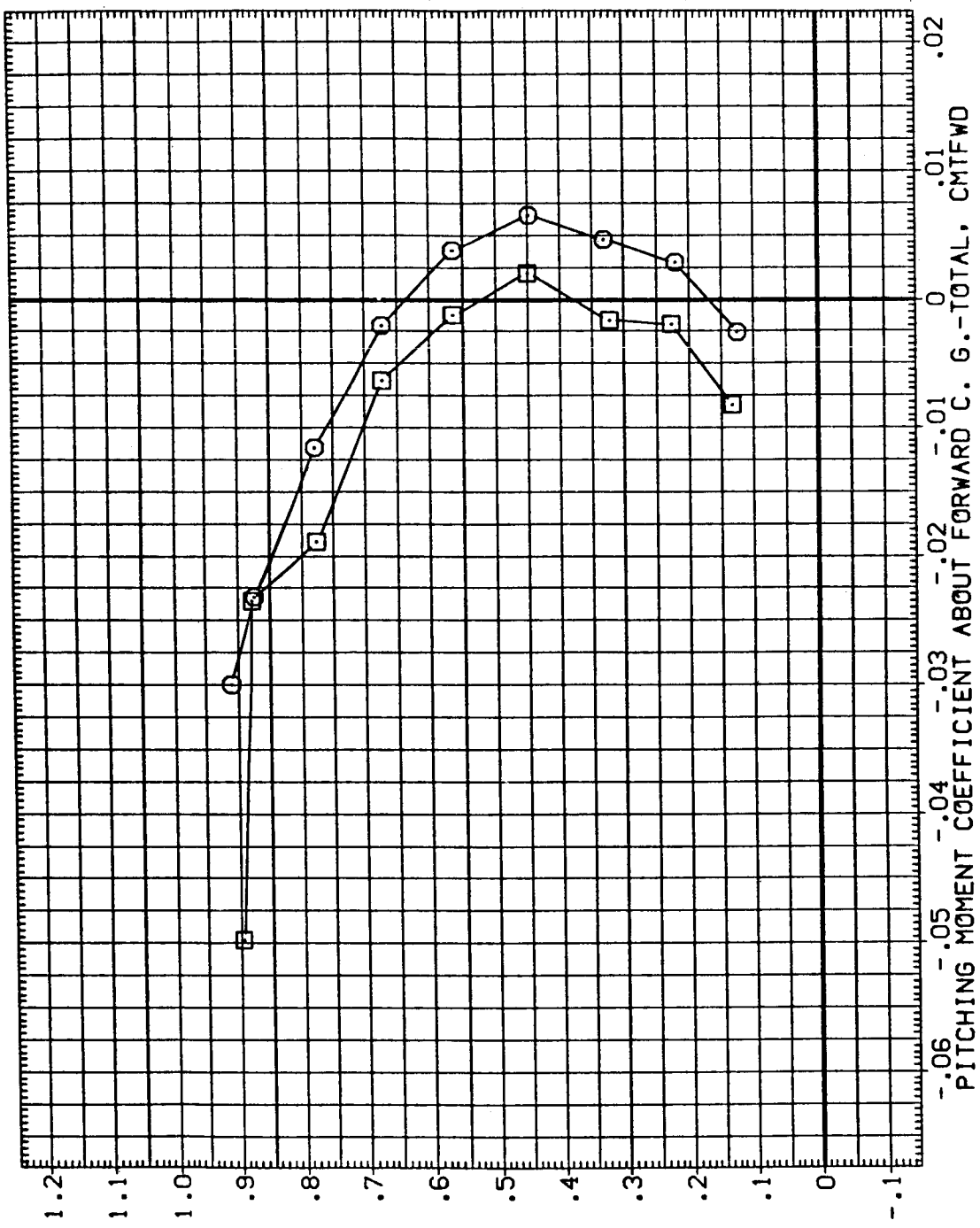


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(EE0013)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	.000	-11.700	55.000	SREF	2690.0000	SQ.FT.
(EE0017)	AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	.000	.000	.000	-11.700	55.000	LREF	474.8000	IN.
							BREF	936.6800	IN.
							XMRP	1076.7000	IN. X0
							YMRP	.0000	IN. Y0
							ZMRP	375.0000	IN. Z0
							SCALE	.0150	

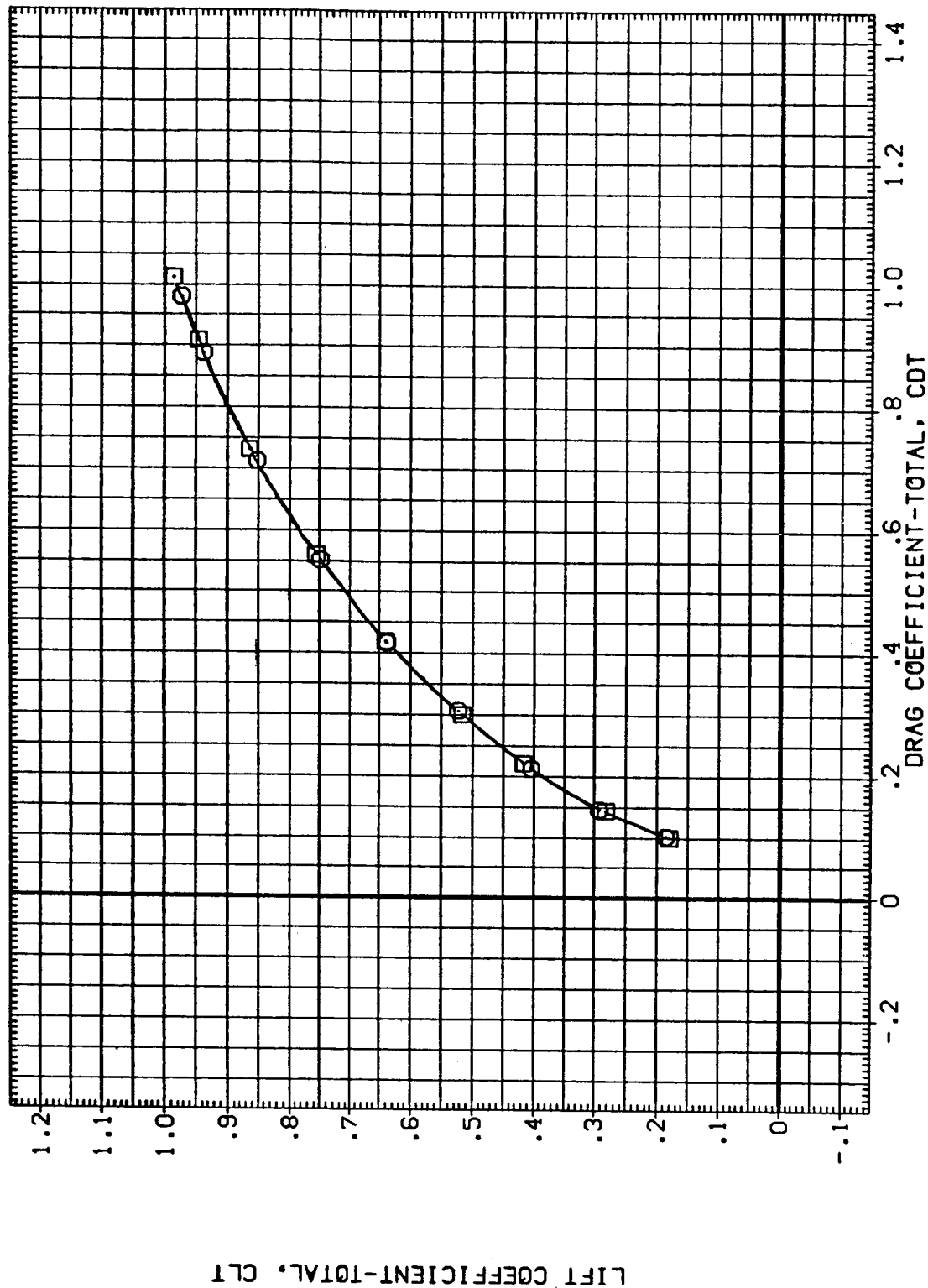


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEOO13)	ANES 3.5-190 OAS8 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEOO17)	ANES 3.5-190 OAS8 (011-N7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

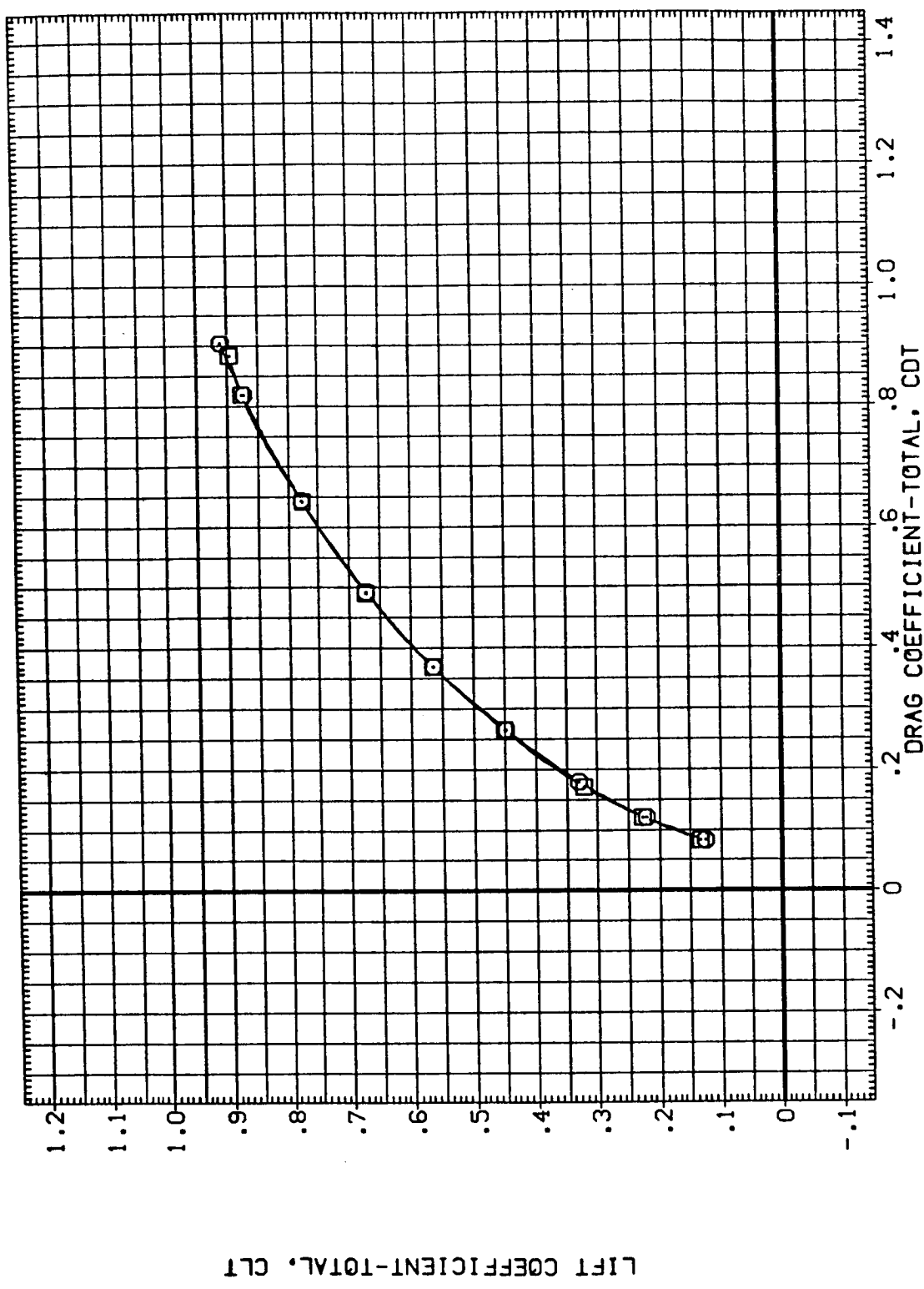


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0013)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0017)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

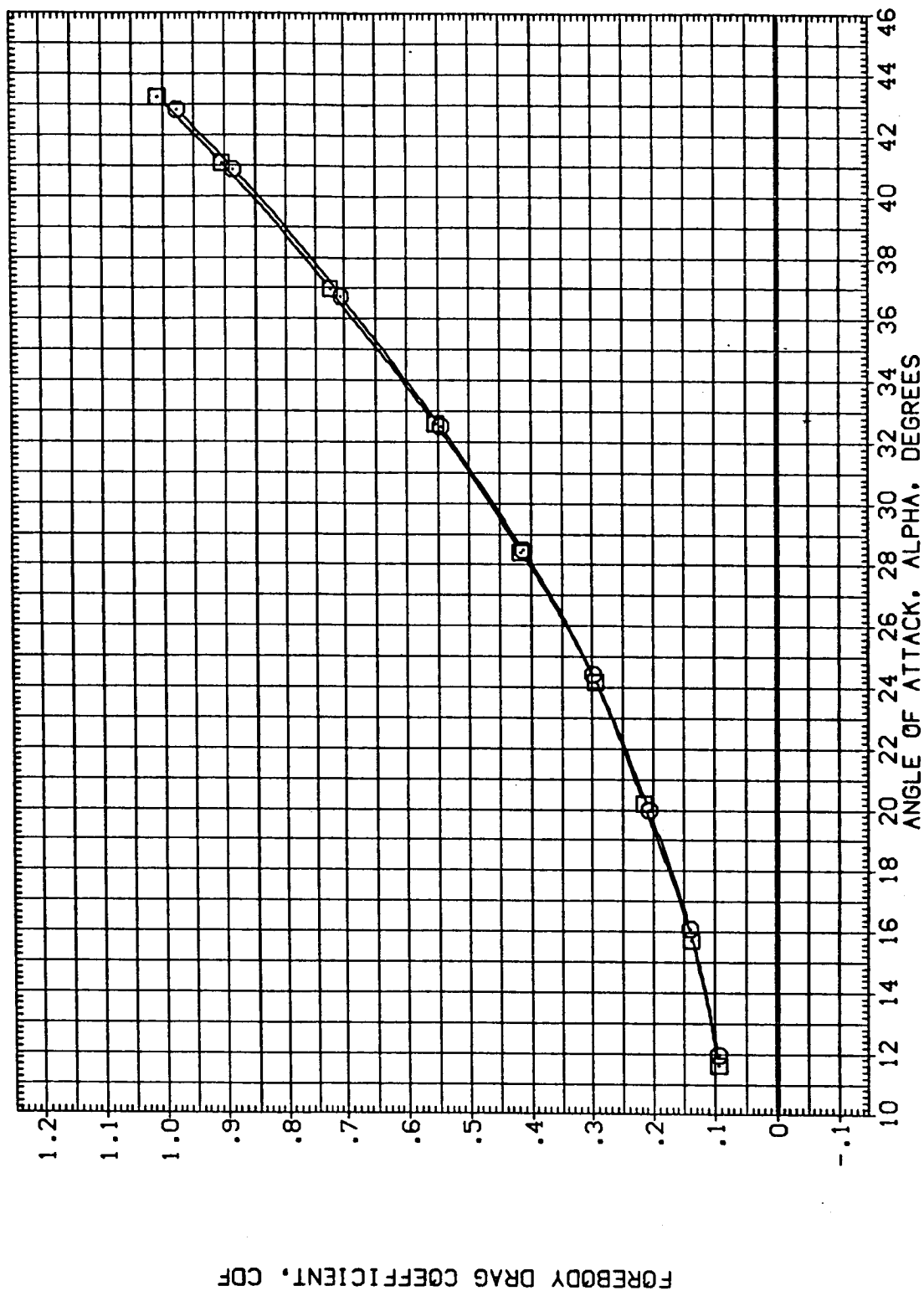


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CAMMACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0013)	ANES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0017)	ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

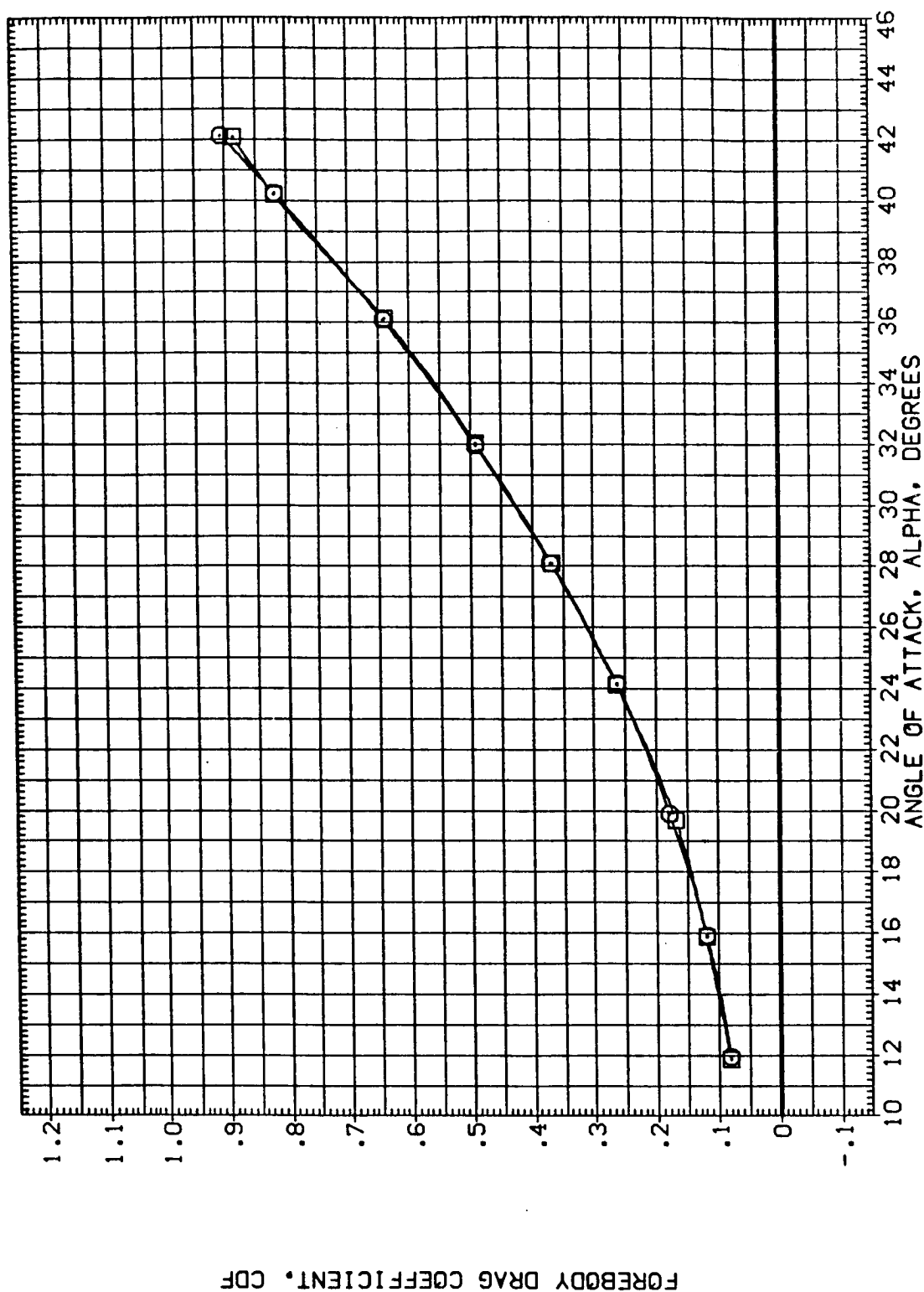


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0013)	AMES 3.5-190 OAS8 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0017)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 536.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

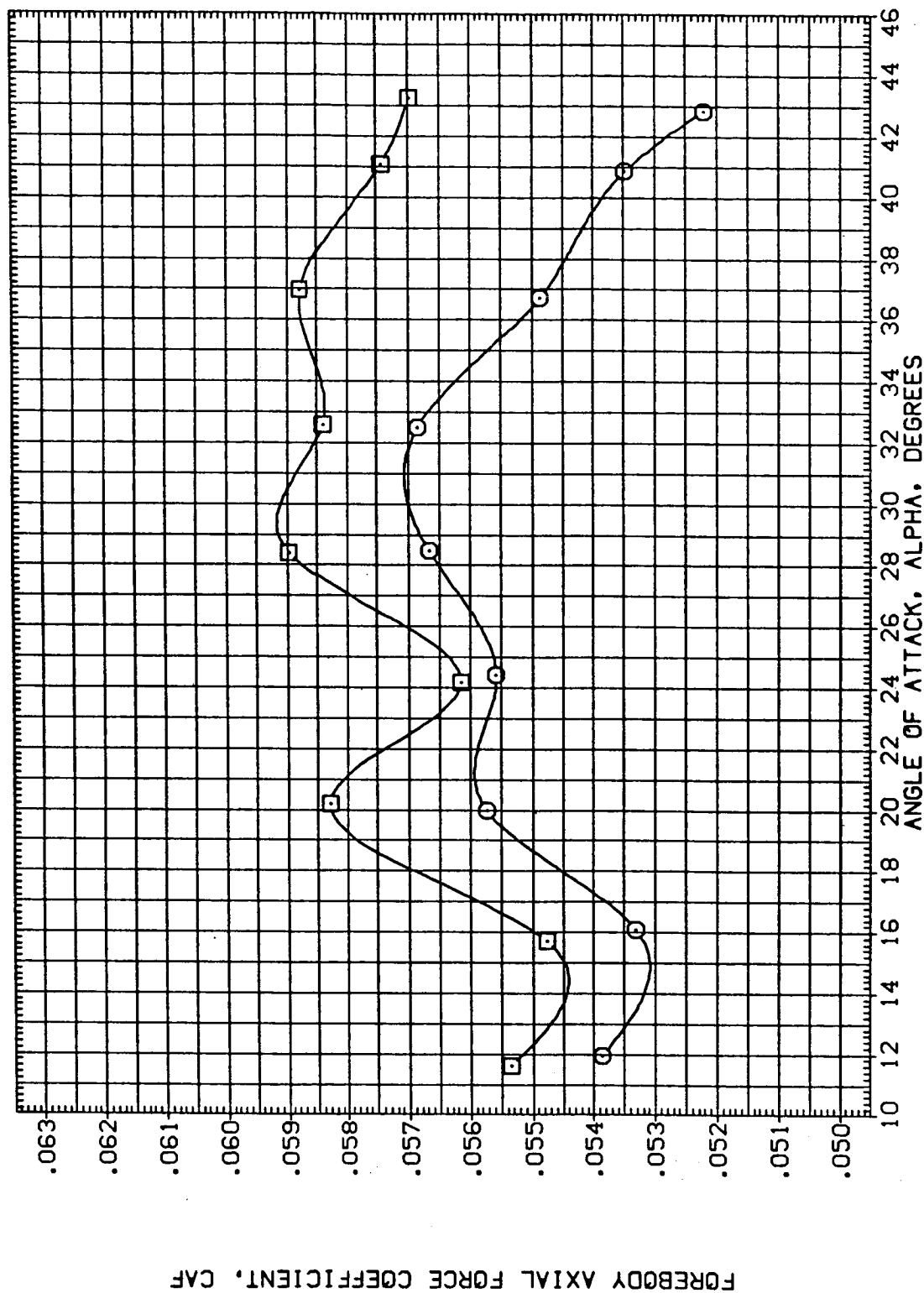


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EE0013)	APES 3.5-190 GA98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0017)	APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

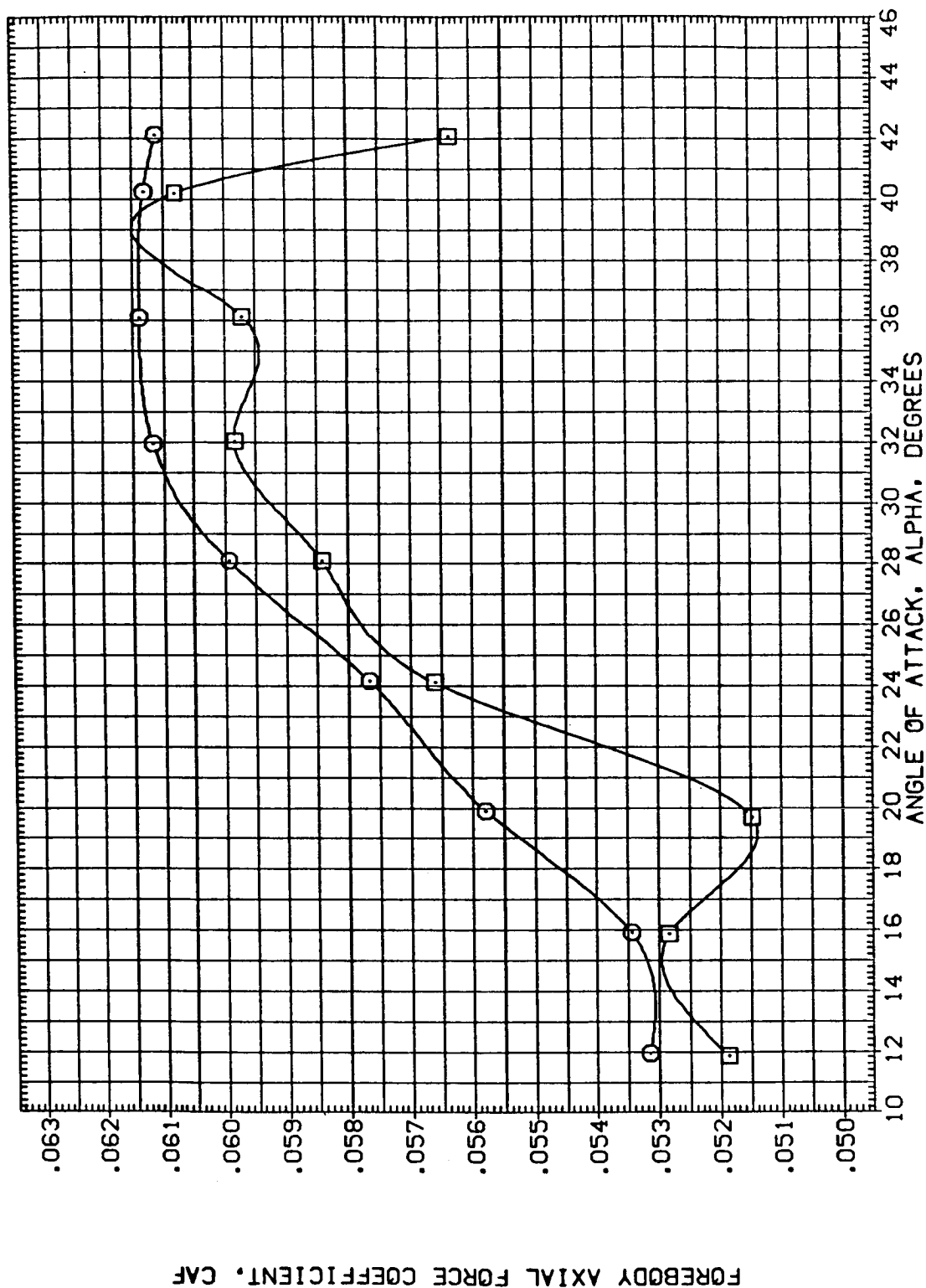


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(8)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0013)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0017)	AMES 3.5-190 OA98 (011-N7+H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

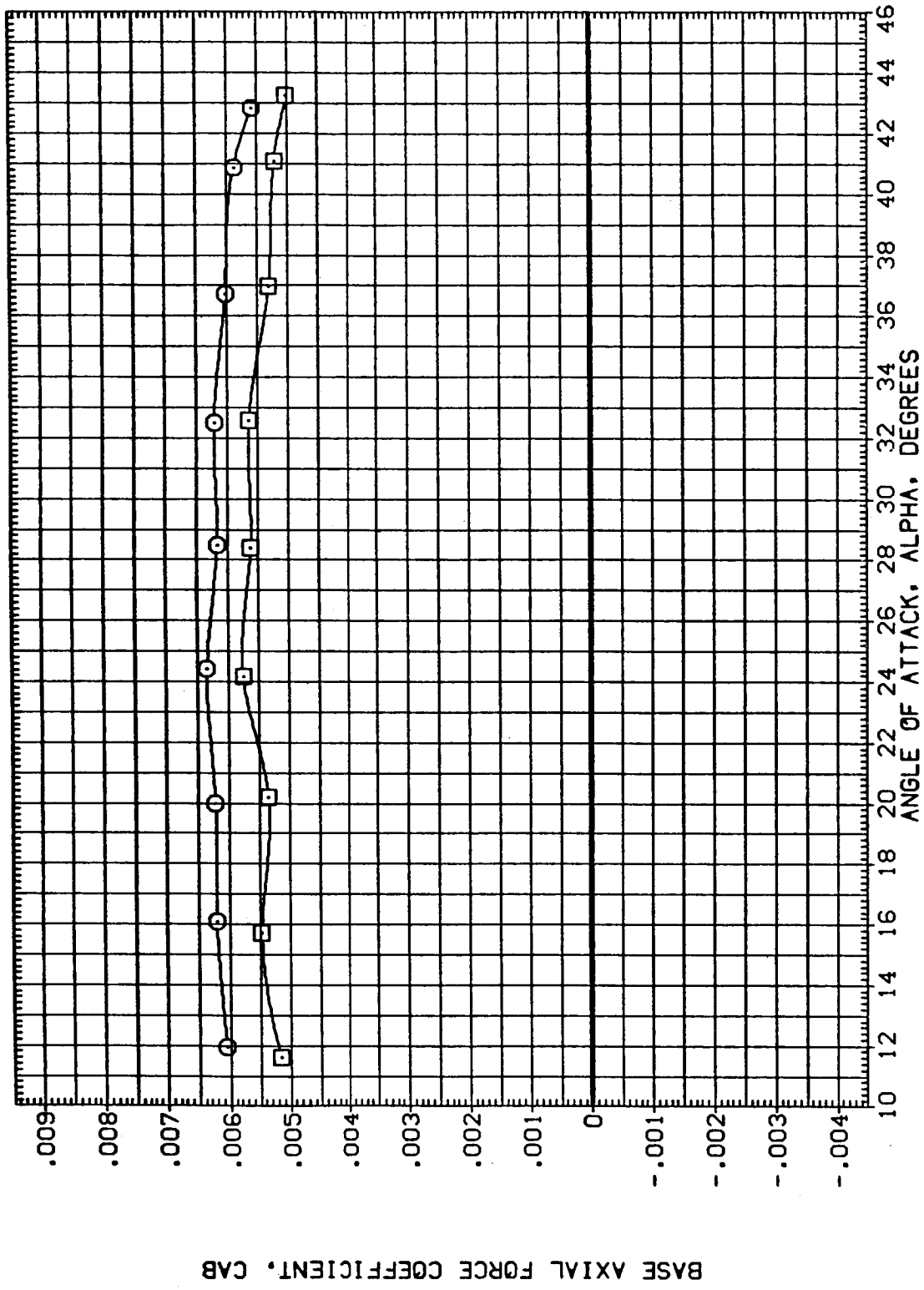


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0013)	AMES 3.5-190 OAS8 (011-N24+DUMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0017)	AMES 3.5-190 OAS8 (011-N24+DUMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

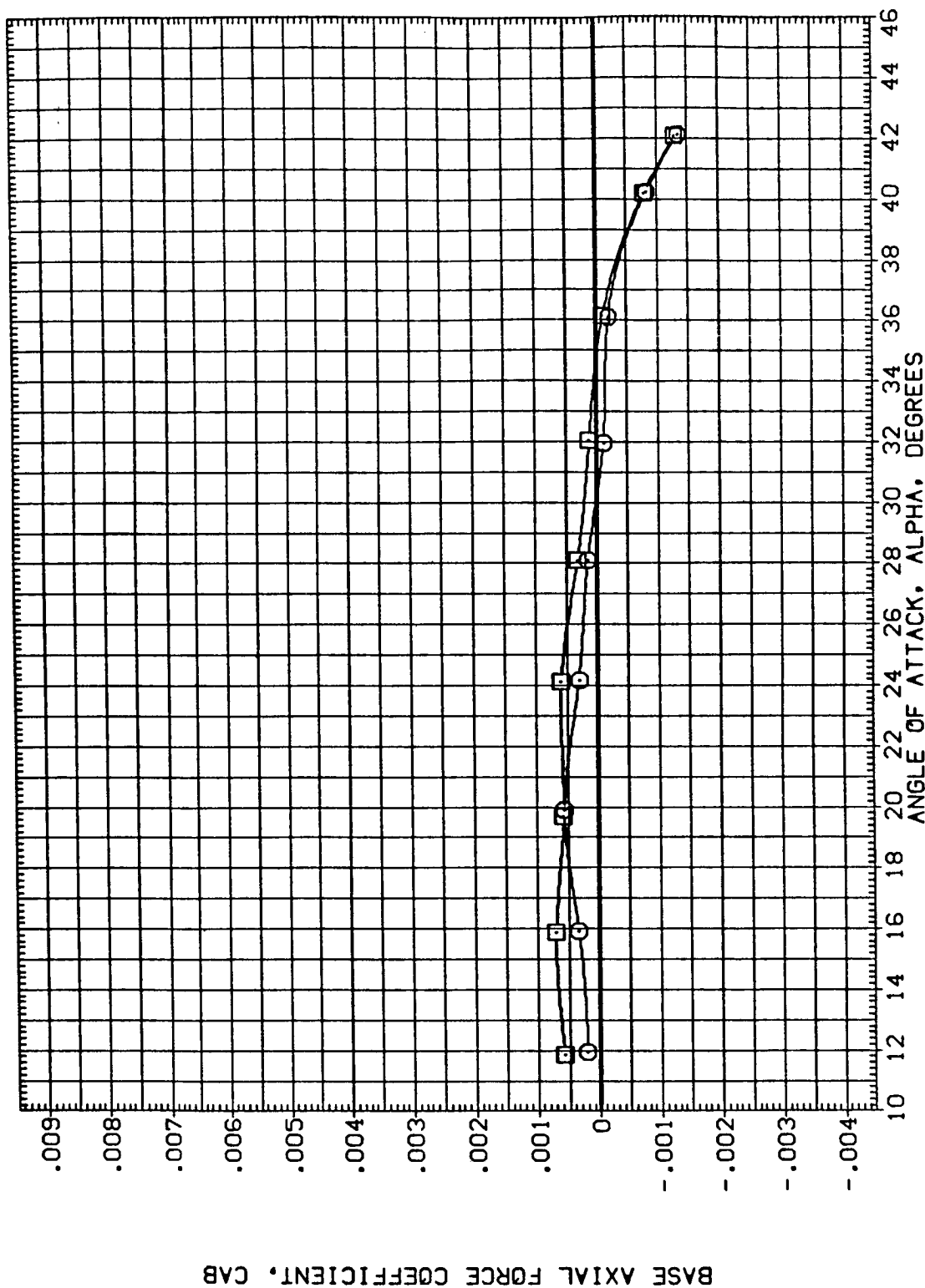


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BEG013)	AMES 3.5-190 GA98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEG017)	AMES 3.5-190 GA98 (011-H7-H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X
						YMRP .0000 IN.Y
						ZMRP .0000 IN.Z
						SCALE .0150

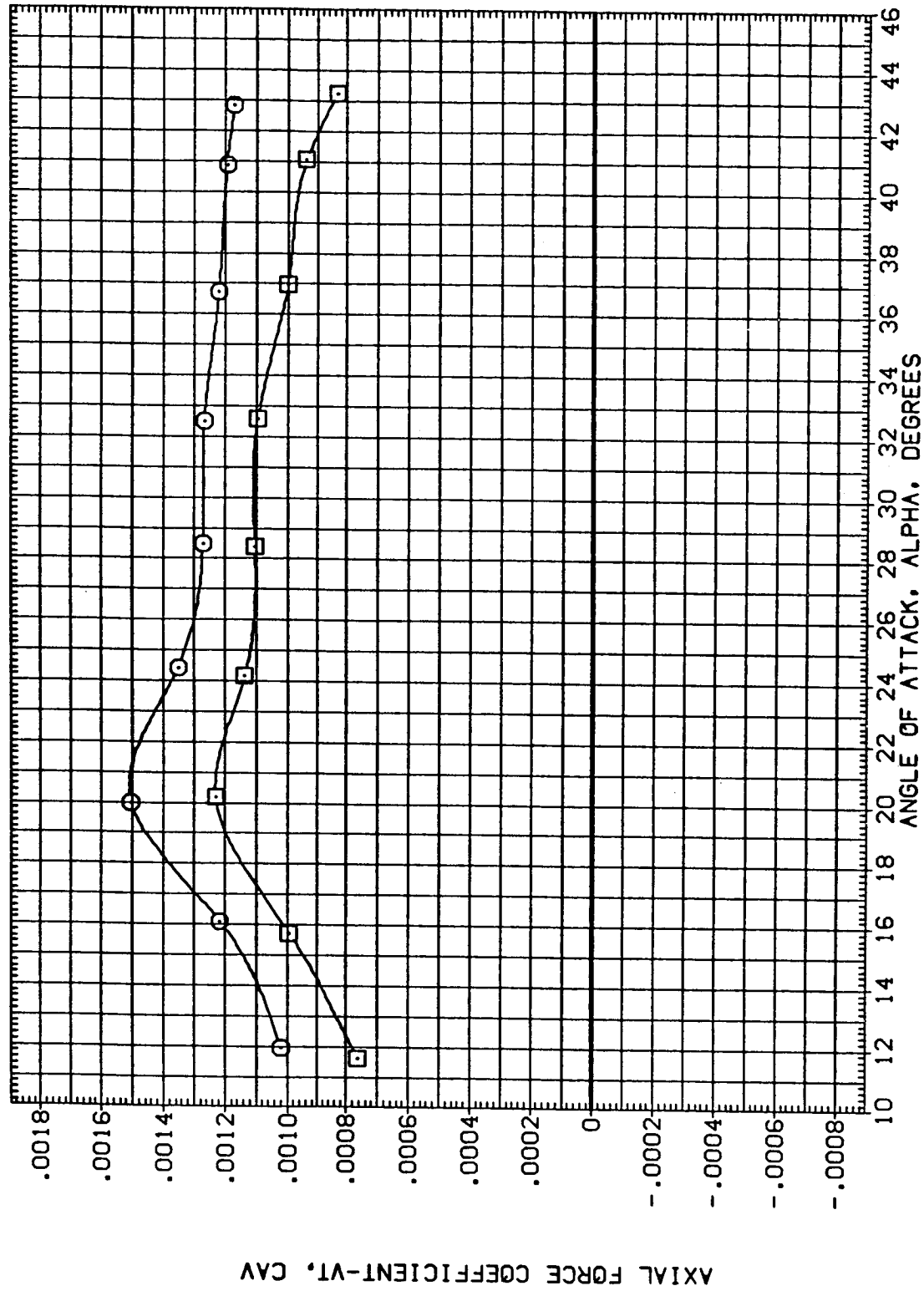


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0013)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(BE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

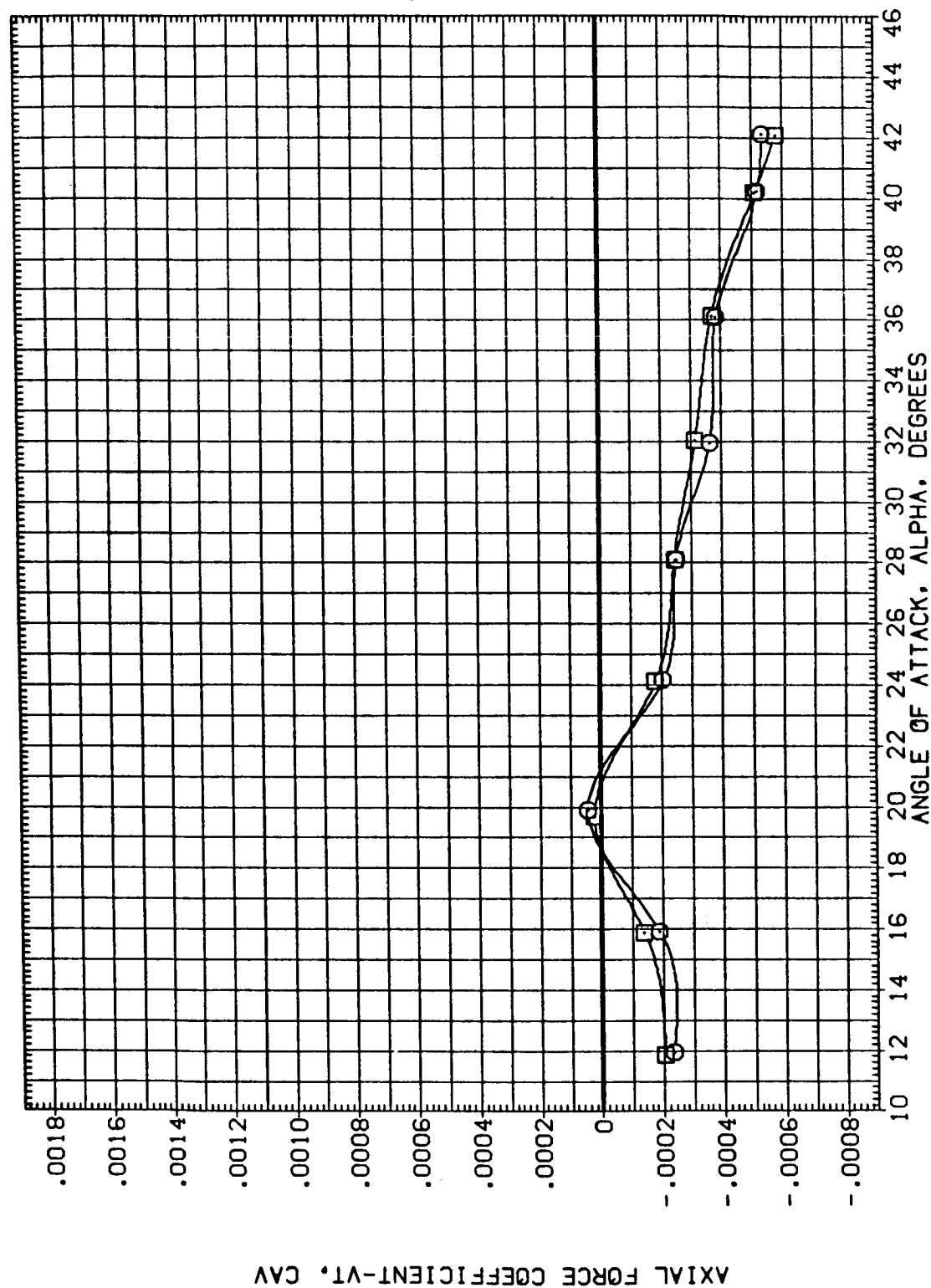


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0012)	AVES 3.5-190 OAS8 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0017)	AVES 3.5-190 OAS8 (011-N7+14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

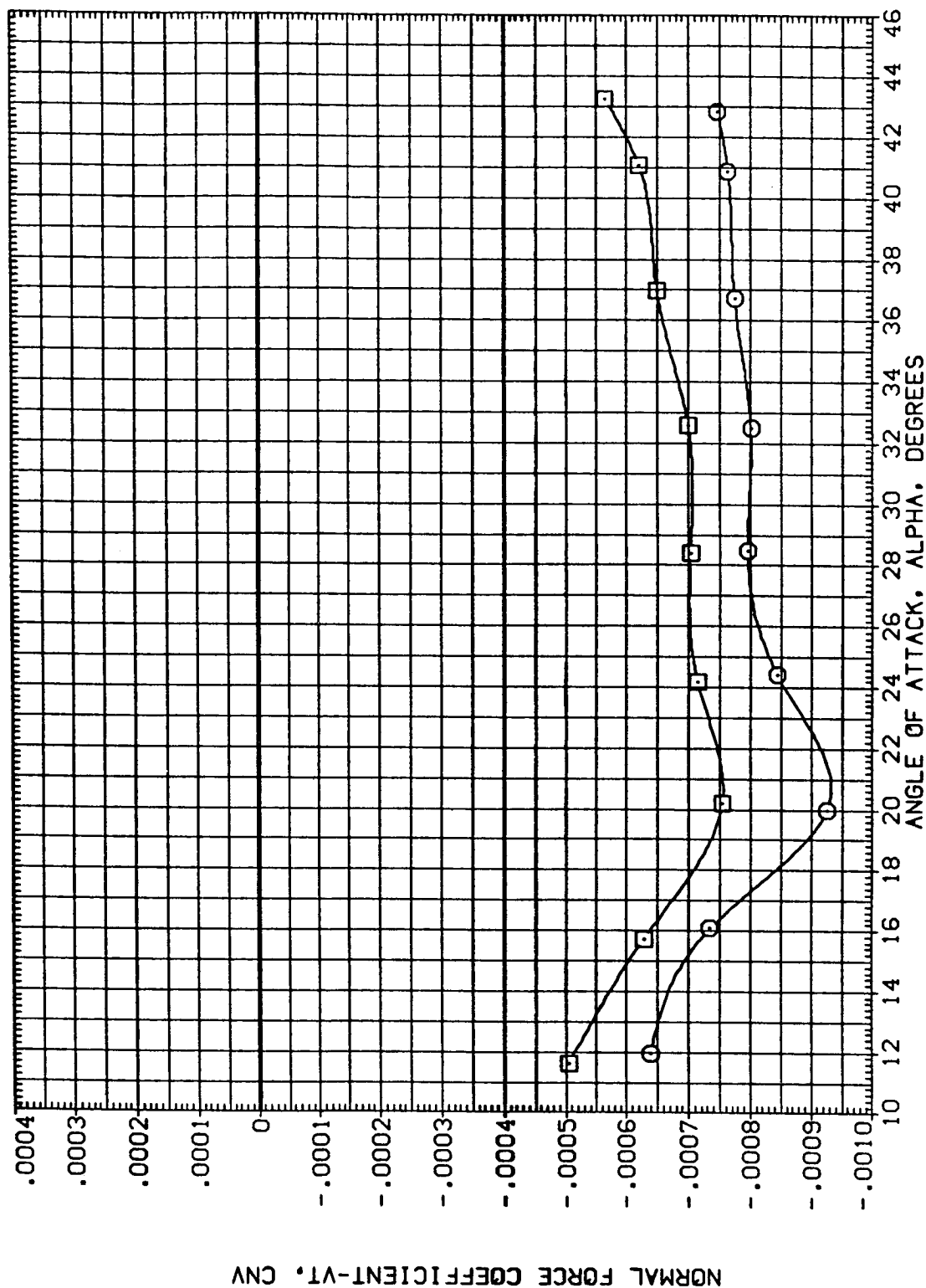


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(BEG0013)	ANES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF	2650.0000 SQ.FT.
(BEG0017)	ANES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF	474.8000 IN.
						BREF	936.6800 IN.
						XMRP	1076.7000 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	.0150

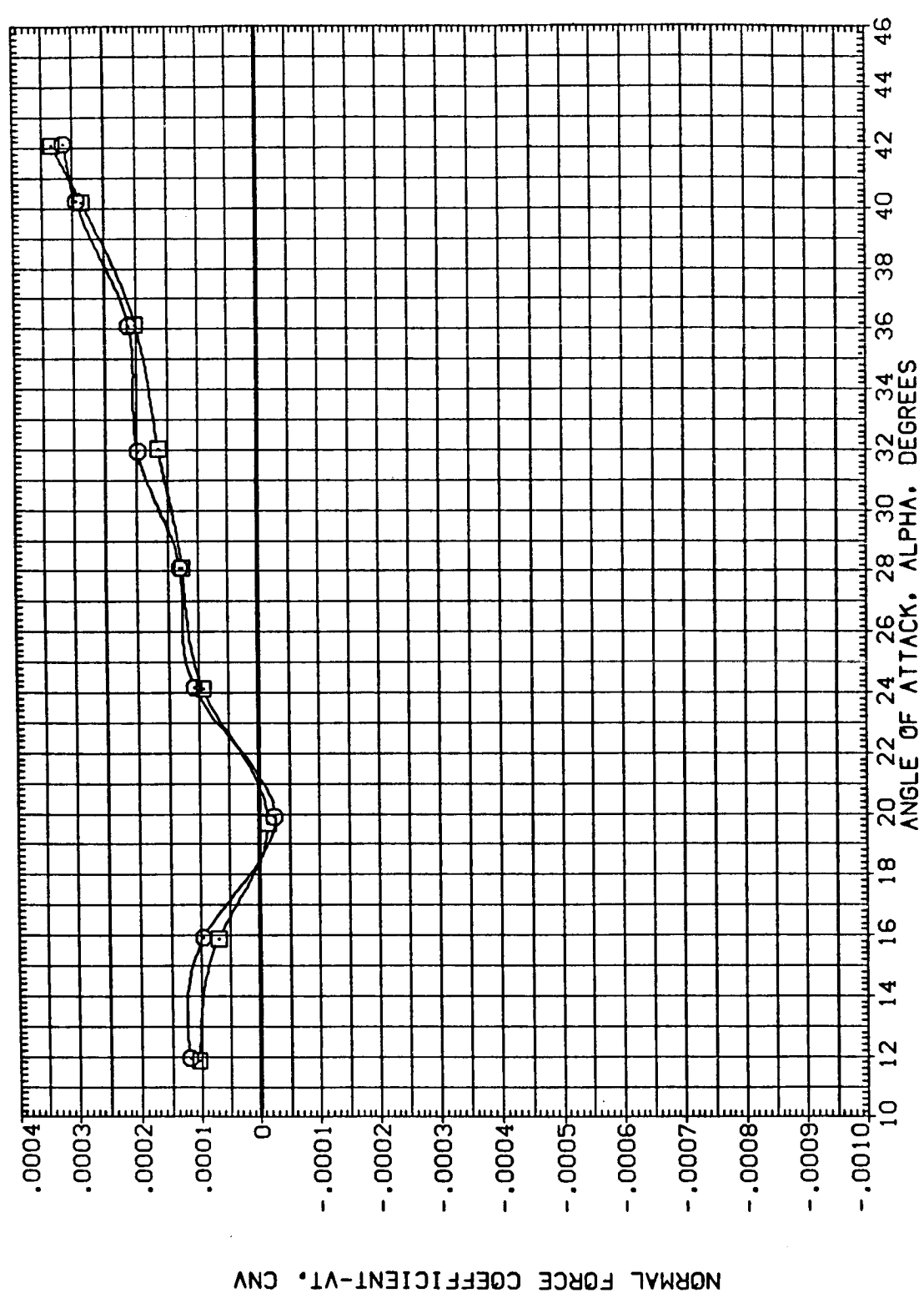


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (BE0013)    AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 (BE0017)    AMES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)

BETA    ELEVON    BOFLAP    SPDBRK  
 .000    .000    -11.700    55.000  
 .000    .000    -11.700    55.000

REFERENCE INFORMATION  
 SREF    2690.0000    50.FT.  
 LREF    474.8000    IN.  
 BREF    936.6800    IN.  
 XMRP    1076.7000    IN.X0  
 YMRP    .0000    IN.Y0  
 ZMRP    375.0000    IN.Z0  
 SCALE    .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-VT, CMFWWD

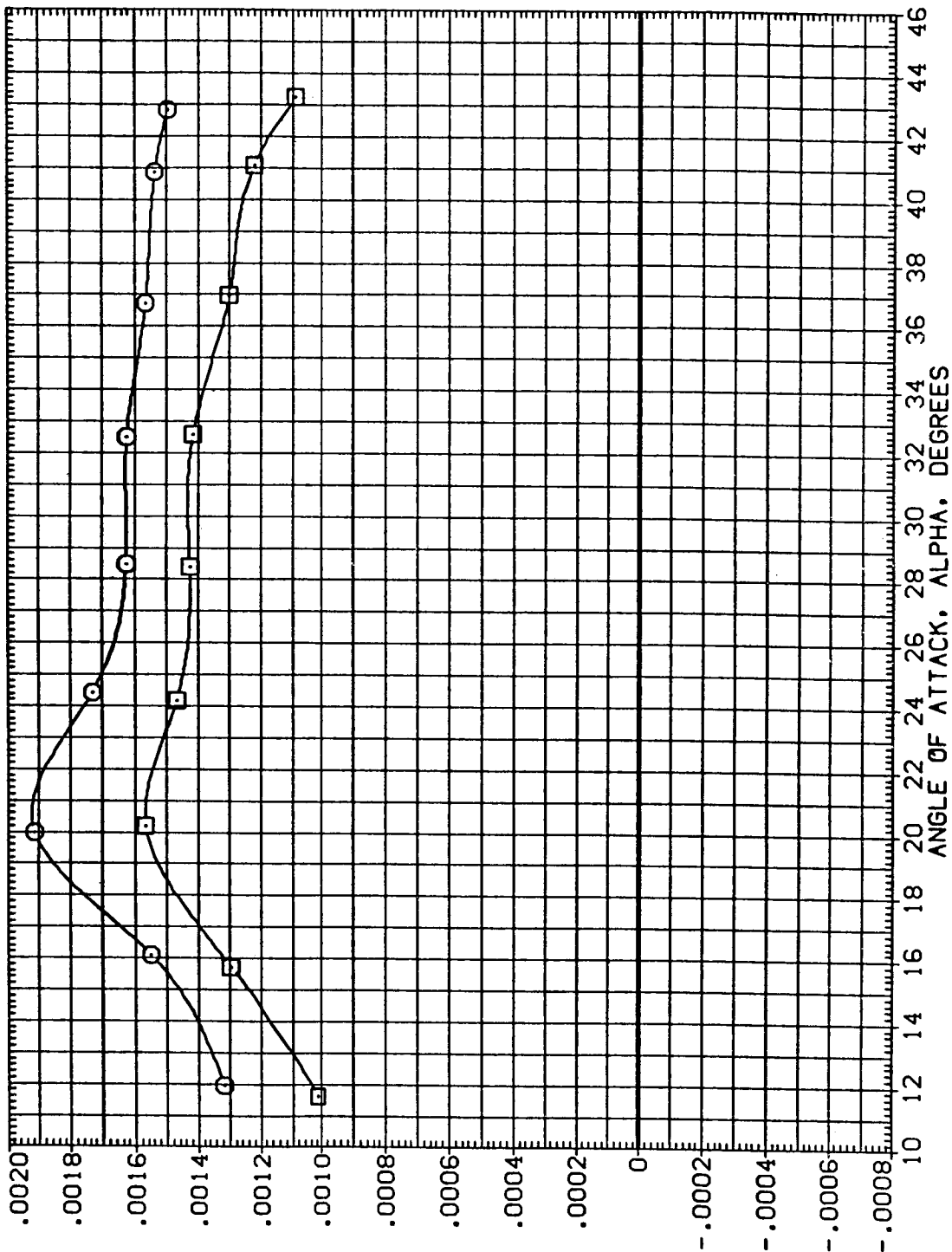


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BE0013) (BE0017)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BDF LAP -11.700 -11.700

SPODBK 55.000 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.XG  
 YMRP .0000 IN.YG  
 ZMRP 375.0000 IN.ZG  
 SCALE .0150

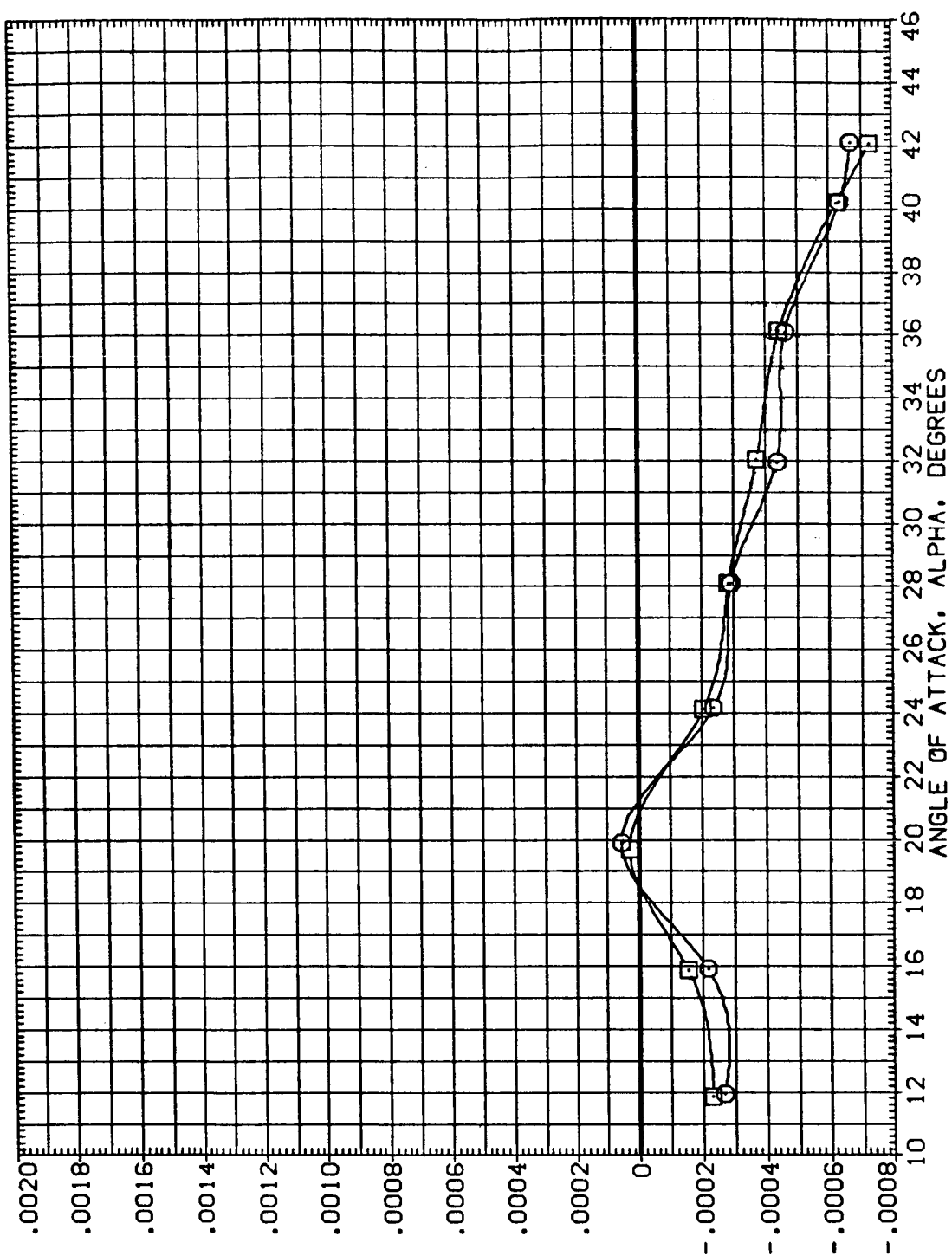


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION	
(BE0013)	□	AVES 3.5-190 DA98 (011-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(BE0017)	□	AVES 3.5-190 DA98 (011-N7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF	474.8000 IN.
							BREF	936.6800 IN.
							XMRP	1076.7000 IN.X0
							YMRP	.0000 IN.Y0
							ZMRP	375.0000 IN.Z0
							SCALE	.0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

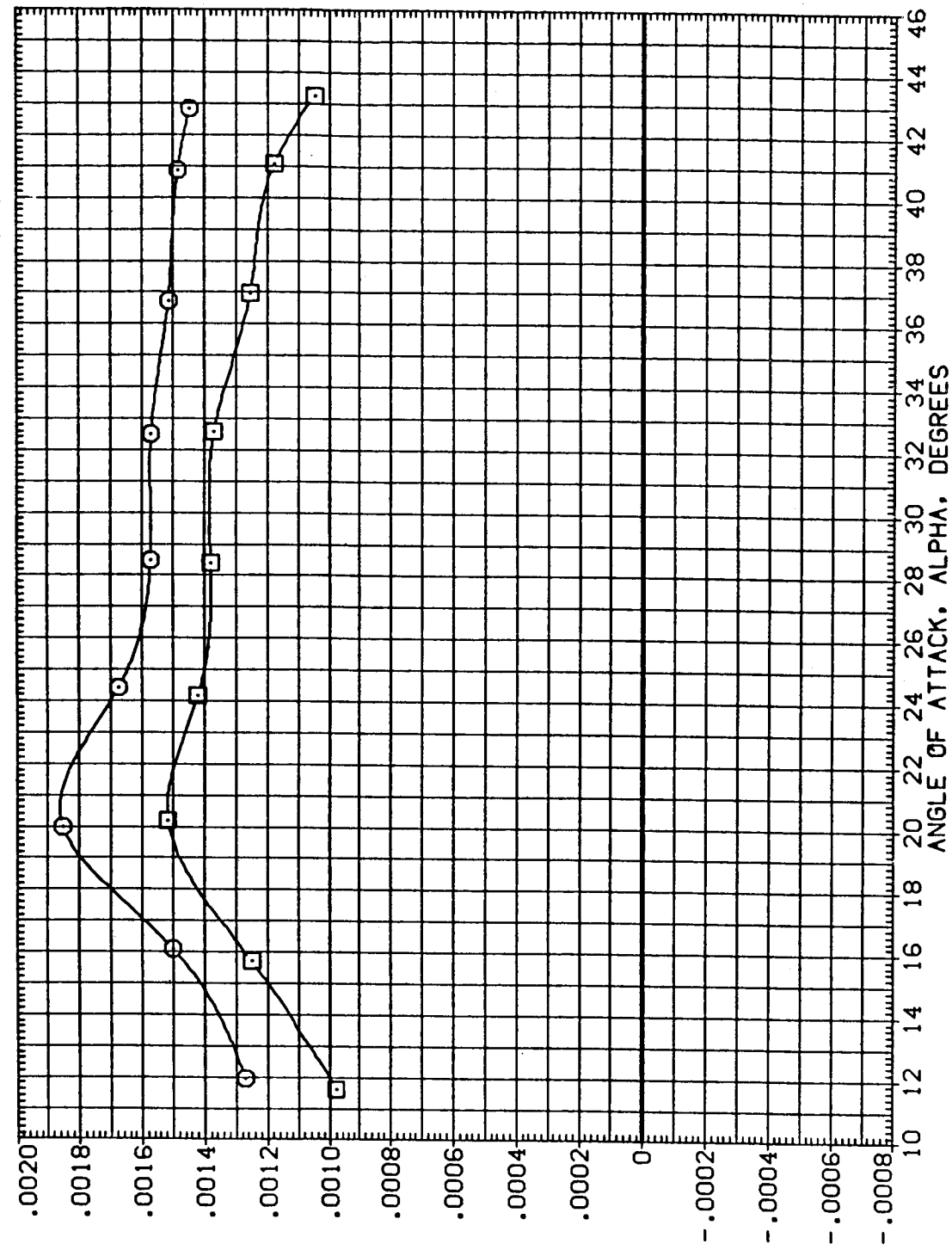



FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BEG013)  (BEG017)

CONFIGURATION DESCRIPTION  
 AVES 3.5-190 OA98 (011-N24+DUMMY STING)  
 AVES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000  
 .000

ELEVON .000  
 .000

BDFLAP -11.700  
 -11.700

SPOBRK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

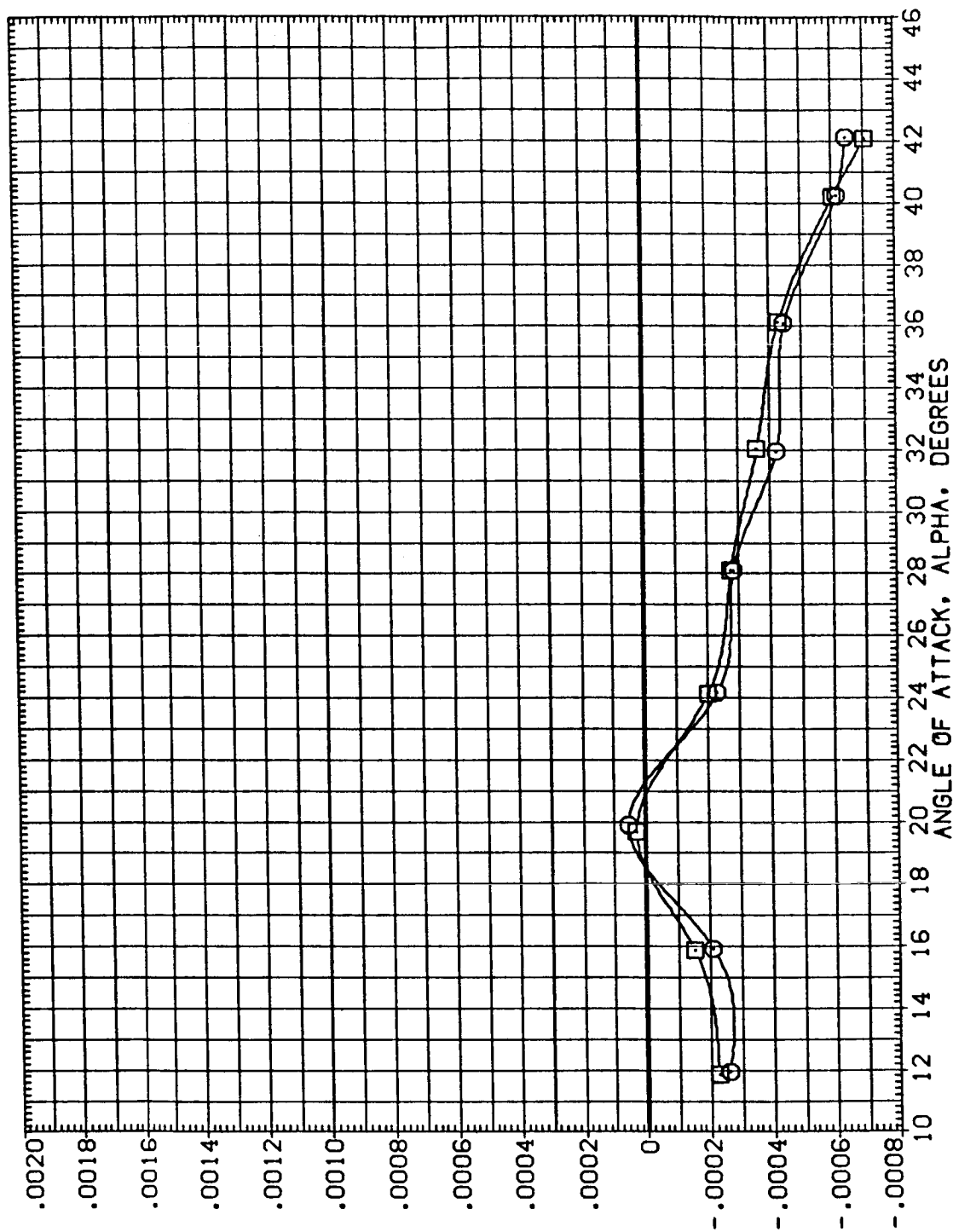


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(B)MACH = 10.27

DATA SET SYMBOL (CE0014) (JE0018)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-H7-M14-N24+DUMMY STING)

BETA .000  
 ELEVON -10.000  
 BOFLAP -11.700  
 SPDBRK 55.000  
 SREF 2690.0000  
 LREF 474.8000  
 BREF 936.6800  
 XMRP 1076.7000  
 YMRP 375.0000  
 ZMRP 375.0000  
 SCALE .0150

REFERENCE INFORMATION  
 SQ.FT. 2690.0000  
 IN. 474.8000  
 IN. 936.6800  
 IN. 1076.7000  
 IN. 375.0000  
 IN. 375.0000  
 IN. 375.0000

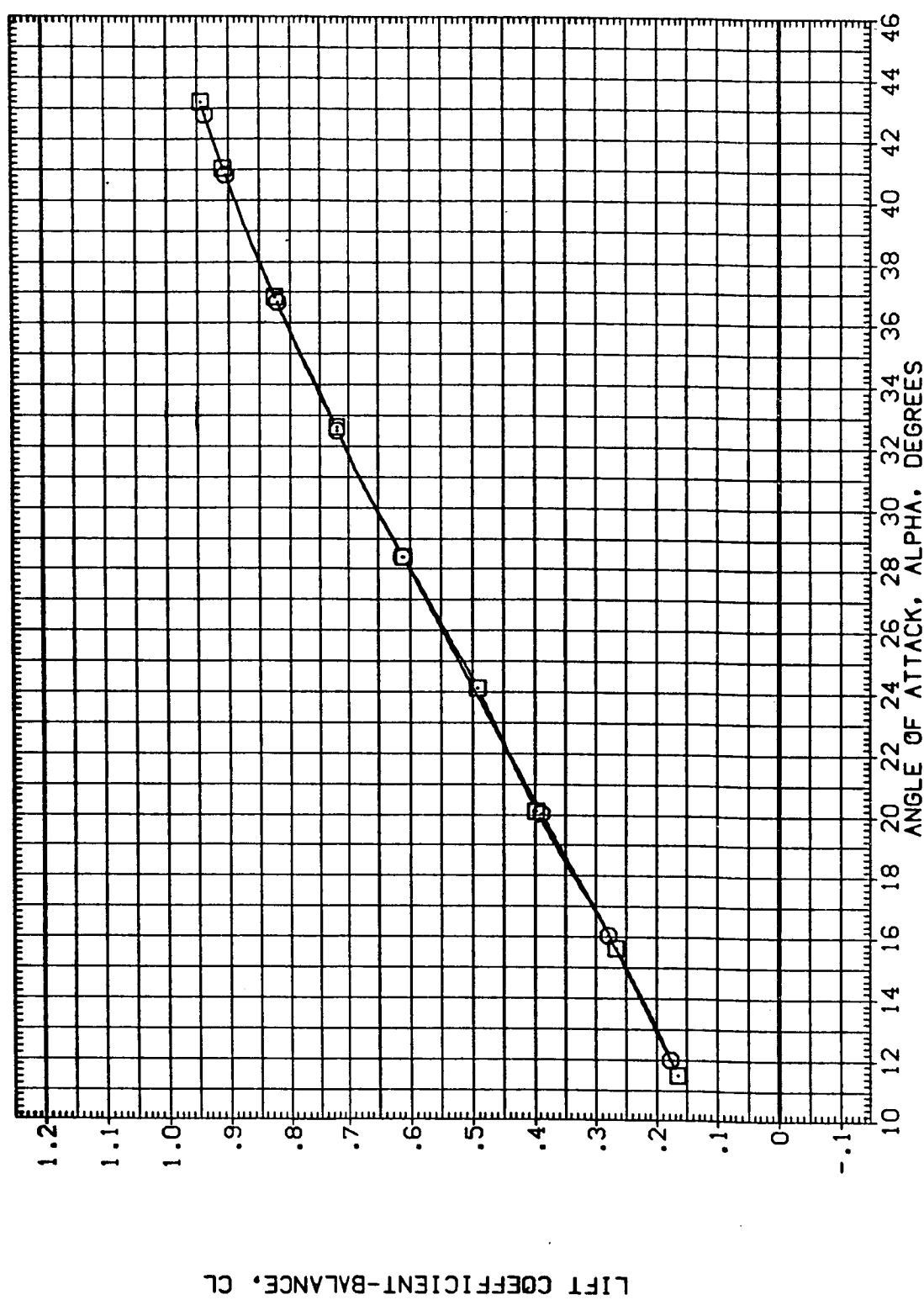


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPODBK	REFERENCE INFORMATION
(CE0014)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(JE0018)	AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6900 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

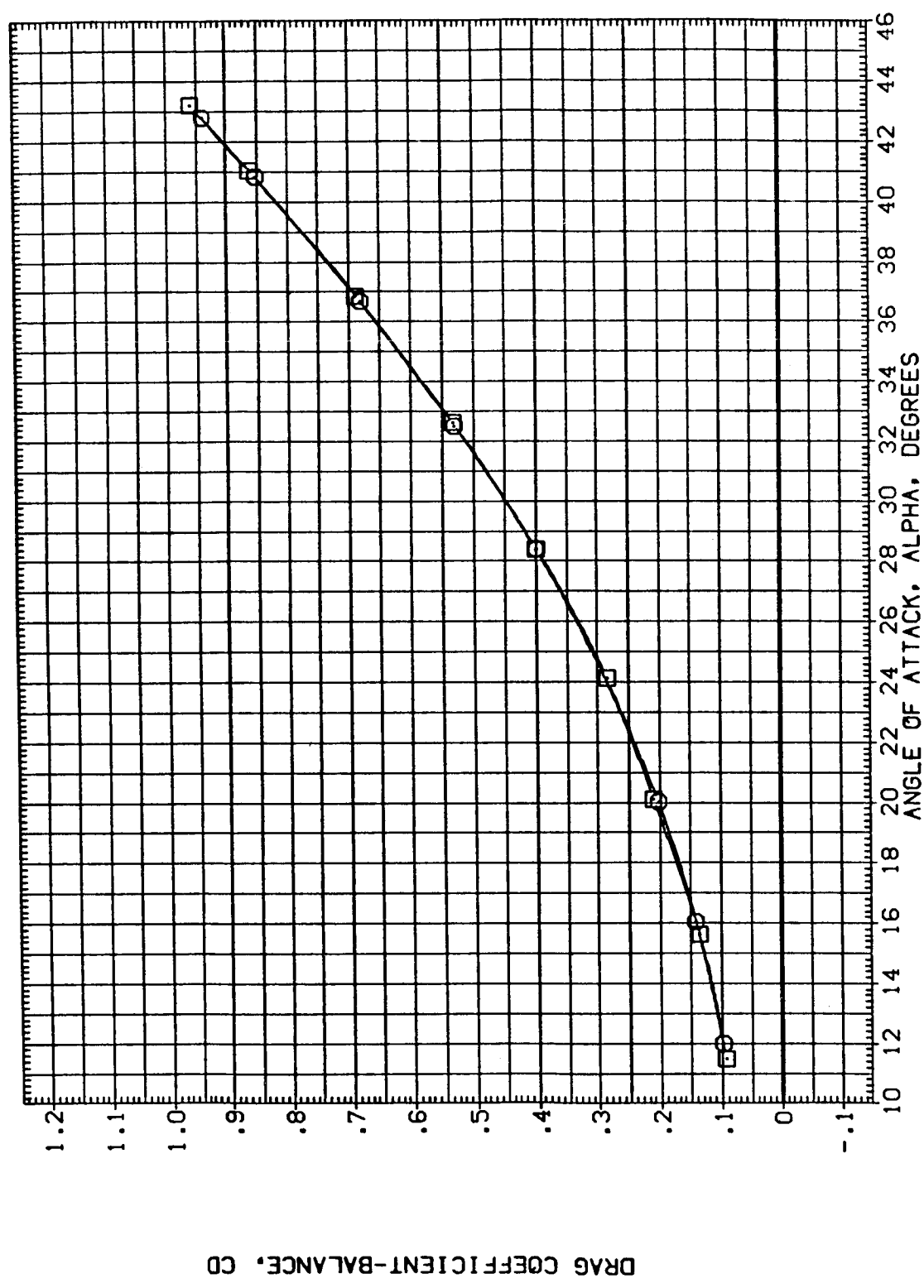


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0014)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(JEC018)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

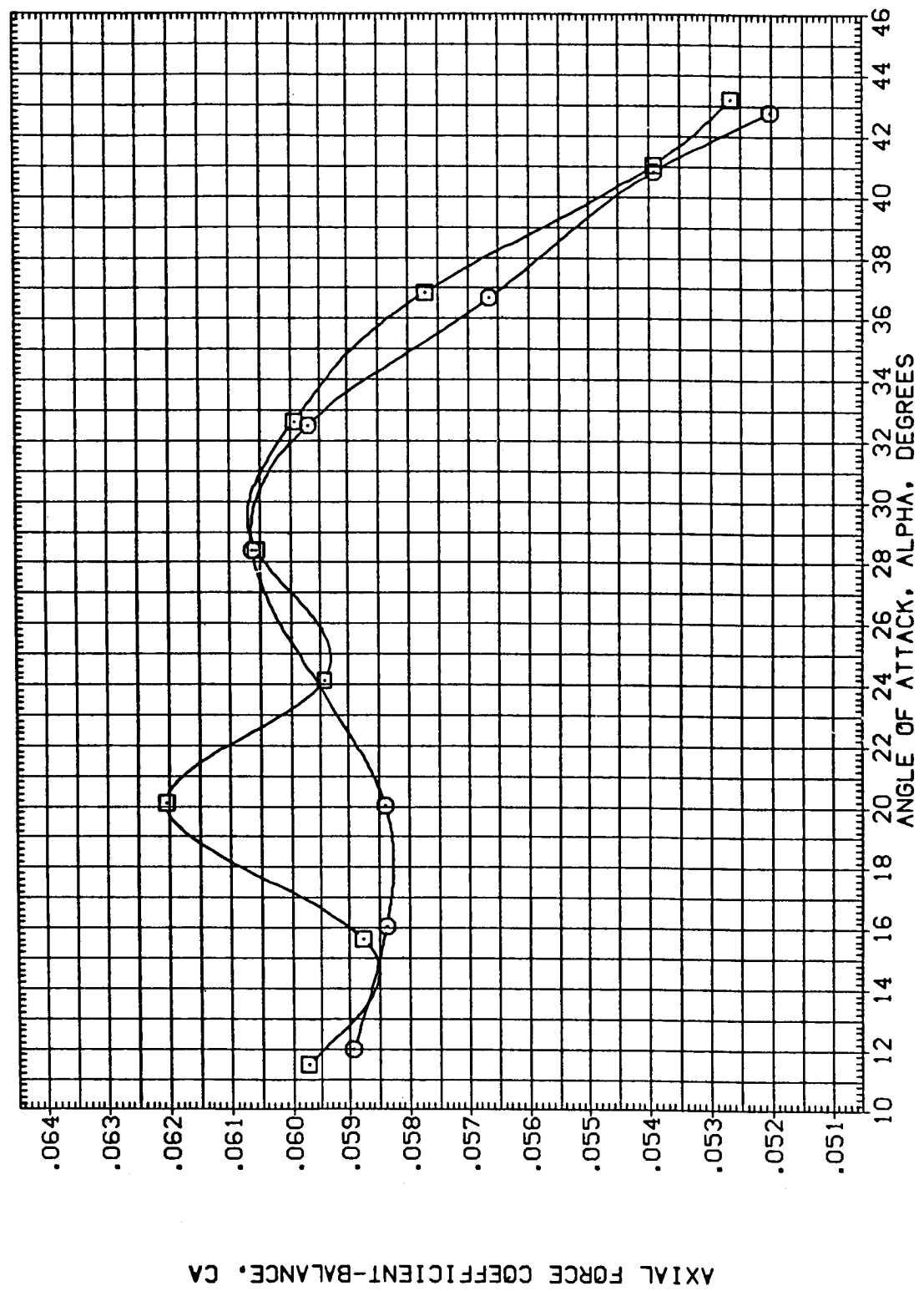


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CEQ014)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 50.FT.
(JEC018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMWD

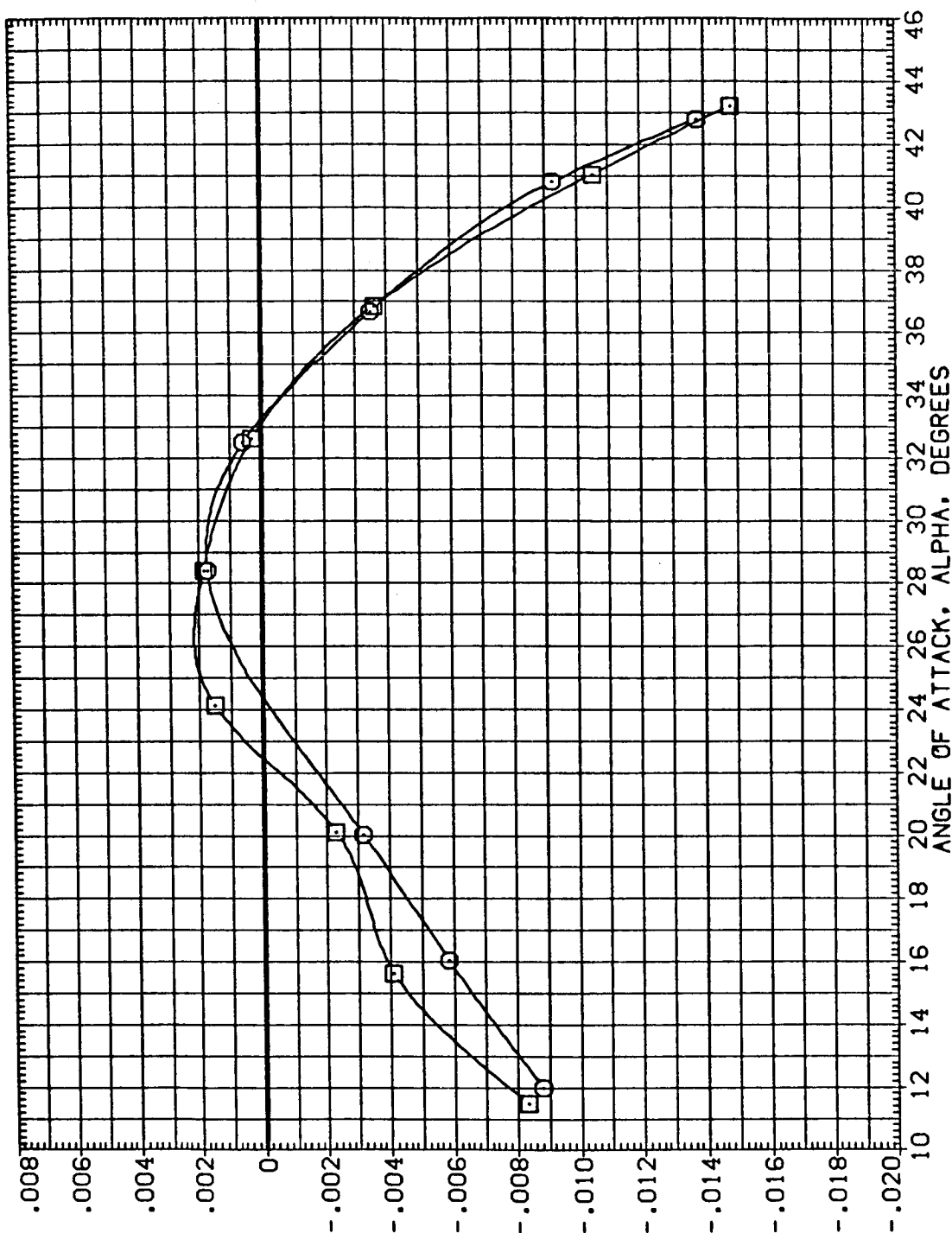


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(M)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CEQ014)	AVES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(JEC018)	AVES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

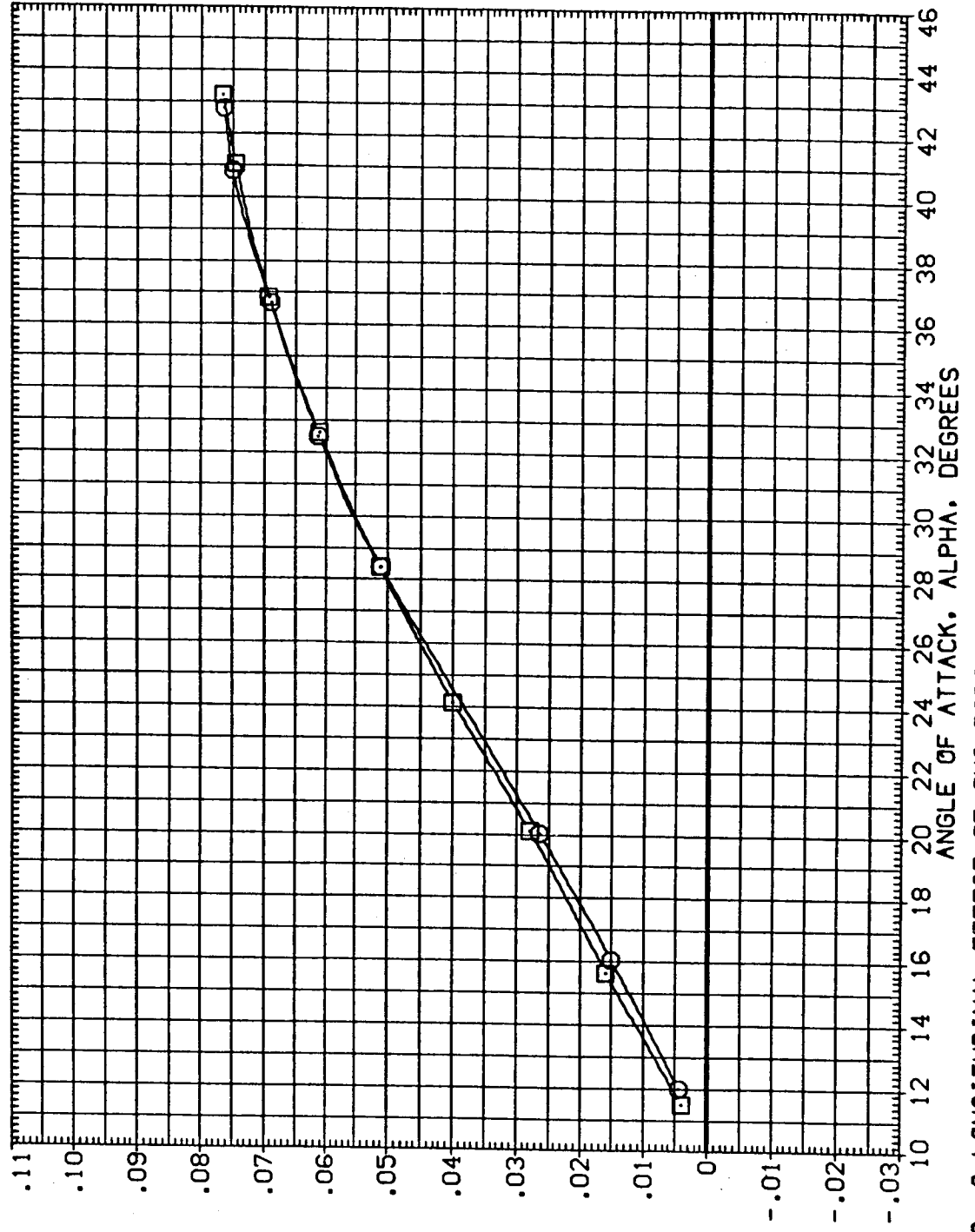


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0014)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 50.FT.
(JE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6900 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

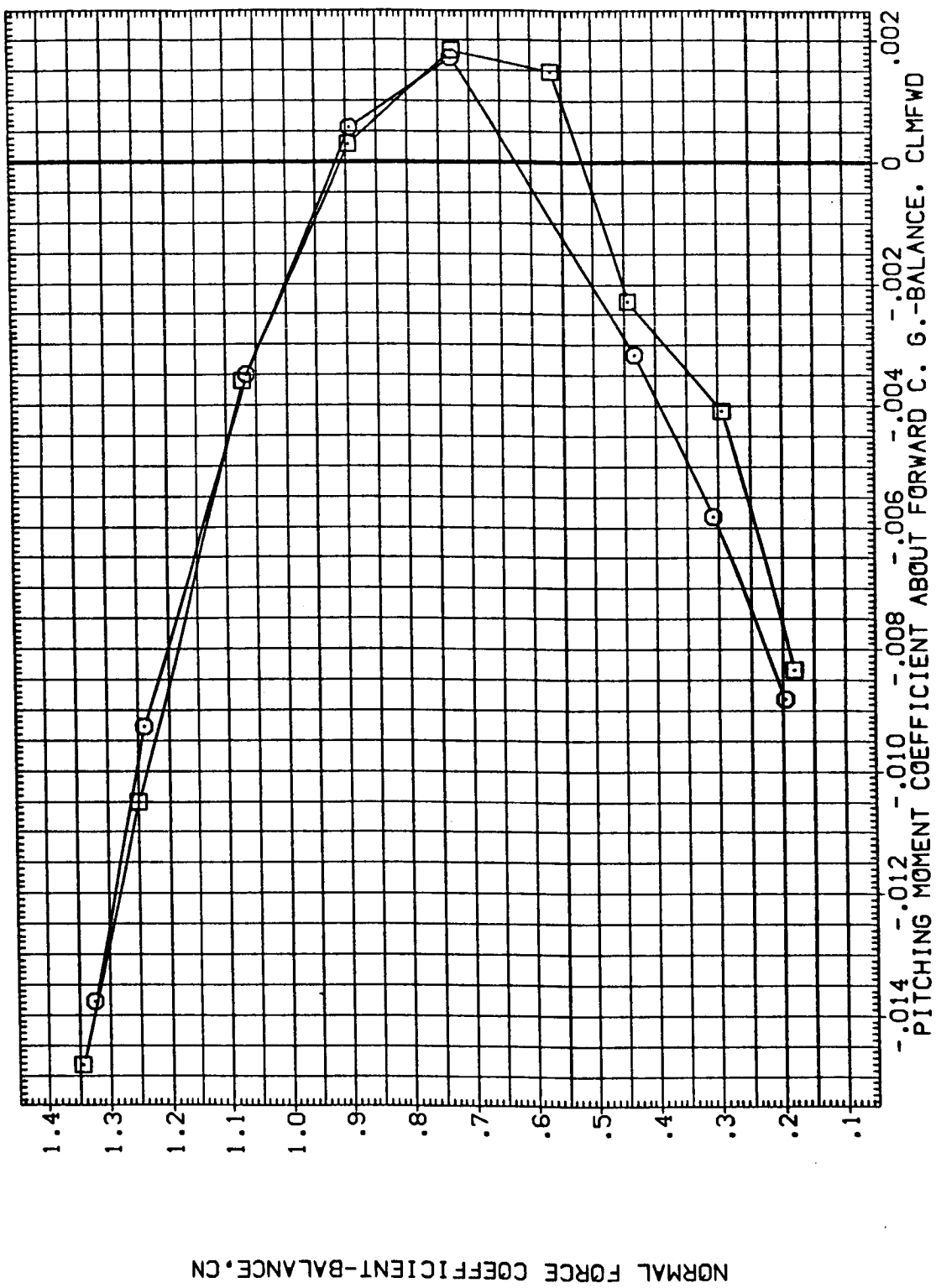


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(CE0014)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(JE0018)	AMES 3.5-190 OA98 (011-M7+H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

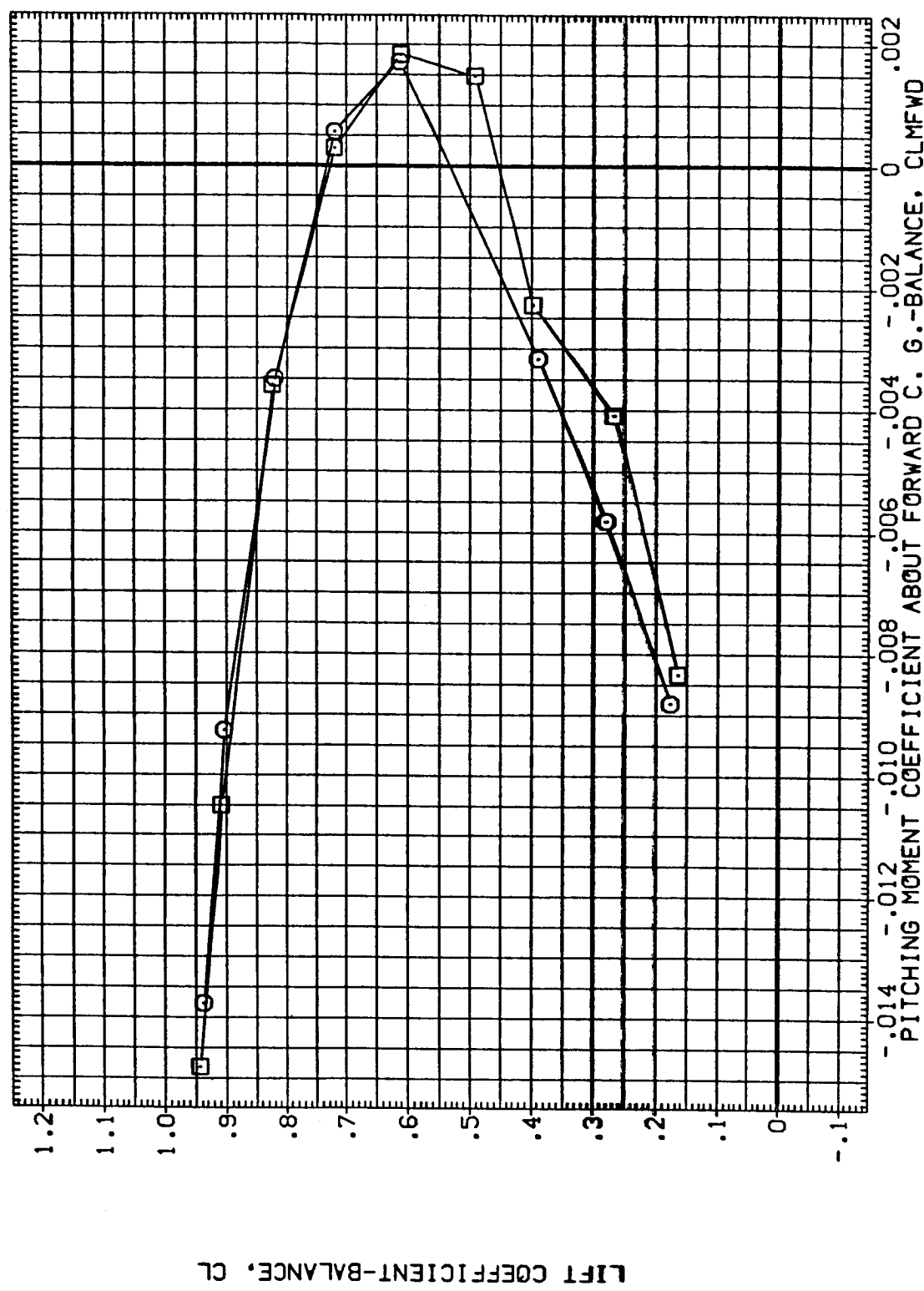


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL  
(CE0014)  
(JEC018)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
-10.000  
-10.000

BOFLAP  
-11.700  
-11.700

SPOBRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

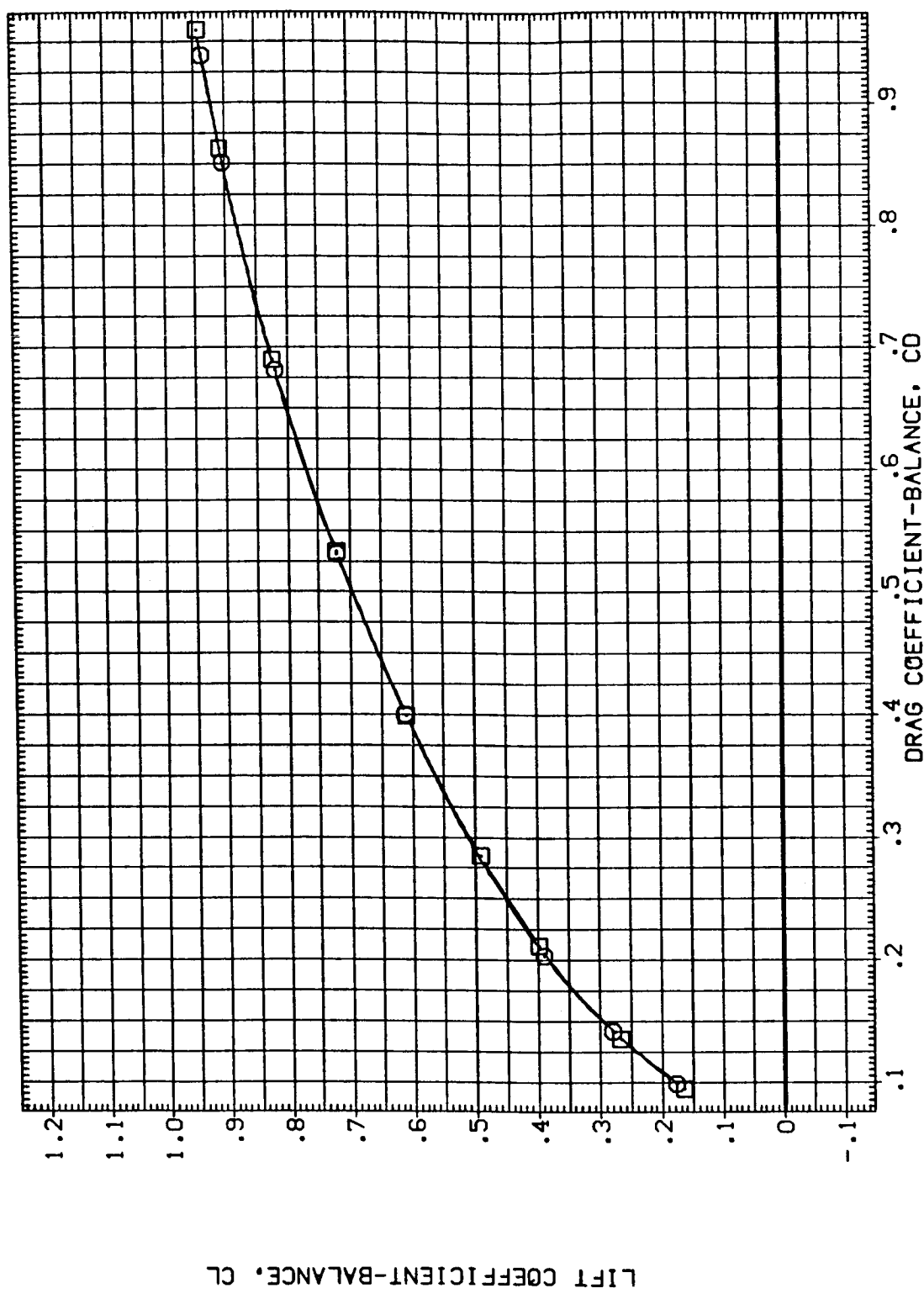


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEO014)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 50.FT.
(KEO018)	AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

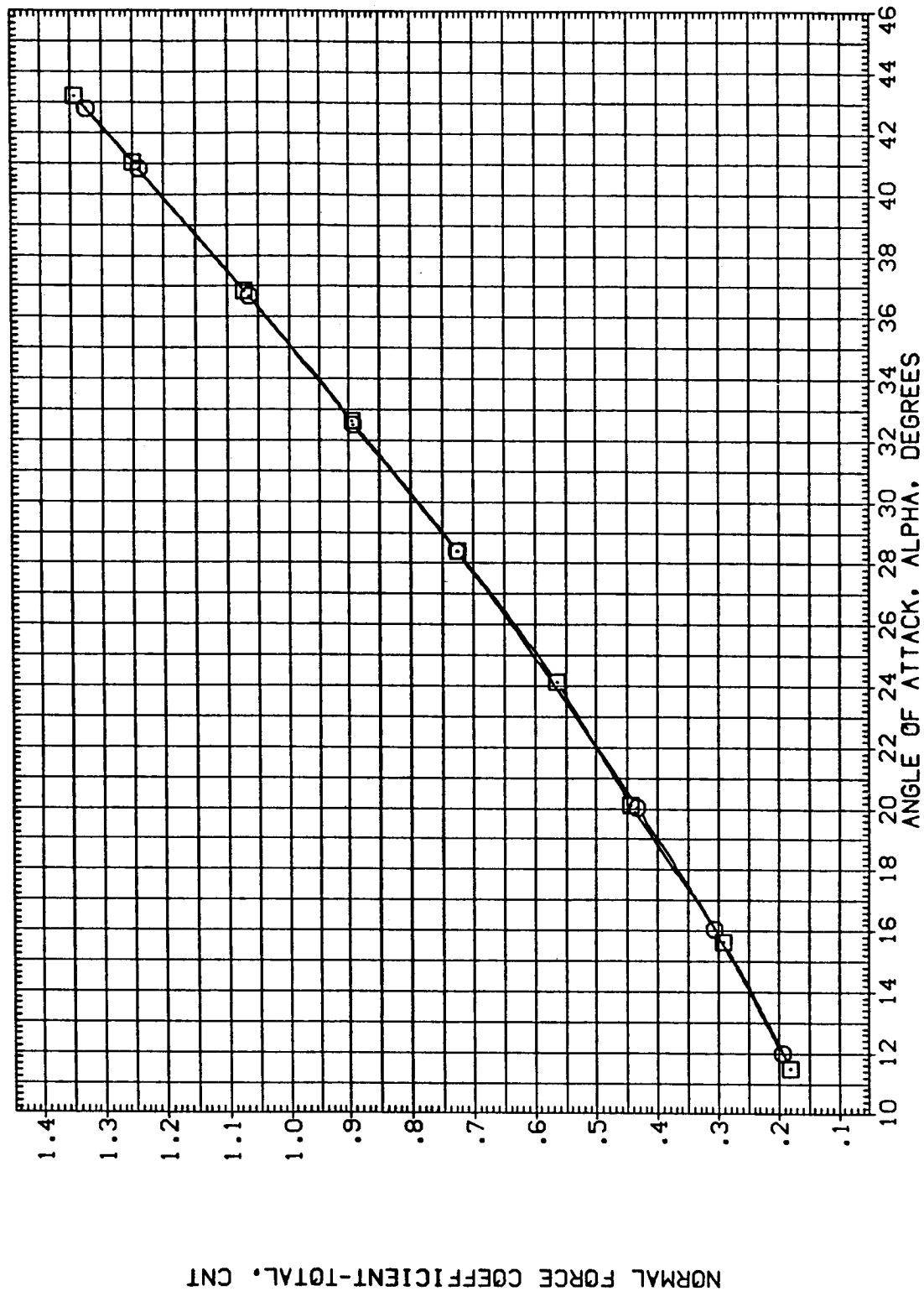


FIG. 6 LONGITUDINAL EFFECT OF QMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0014) (KE0018)

CONFIGURATION DESCRIPTION AMES 3.5-190 0A98 (011-N24+DUMMY STING) AMES 3.5-190 0A98 (011-M14-N24+DUMMY STING)

BETA .000 .000

ELEVON -10.000 -10.000

BOFLAP -11.700 -11.700

SPDRBK 55.000 55.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.X0 YMRP .0000 IN.Y0 ZMRP 375.0000 IN.Z0 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

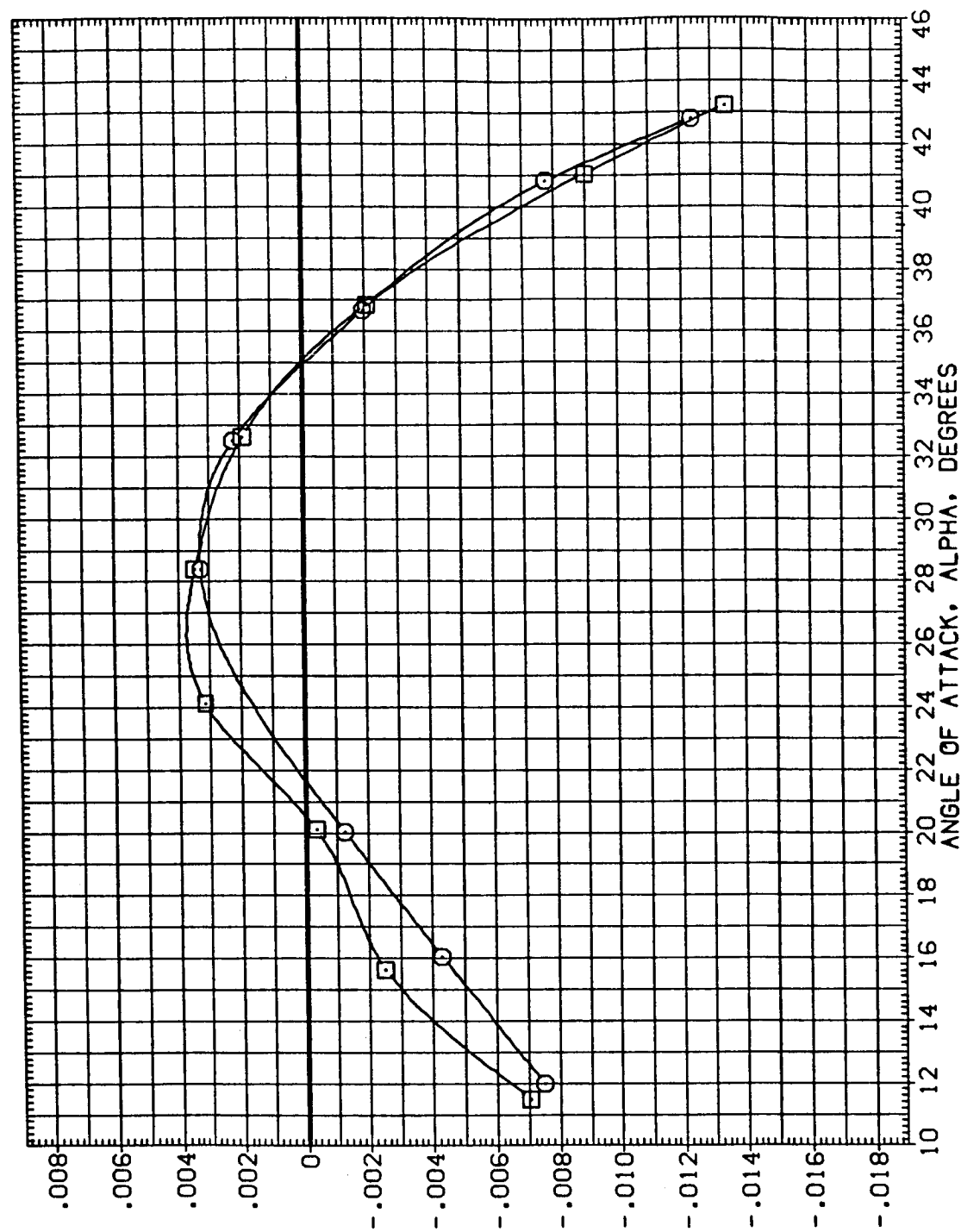


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0014)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 50.FT.
(KE0018)	AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

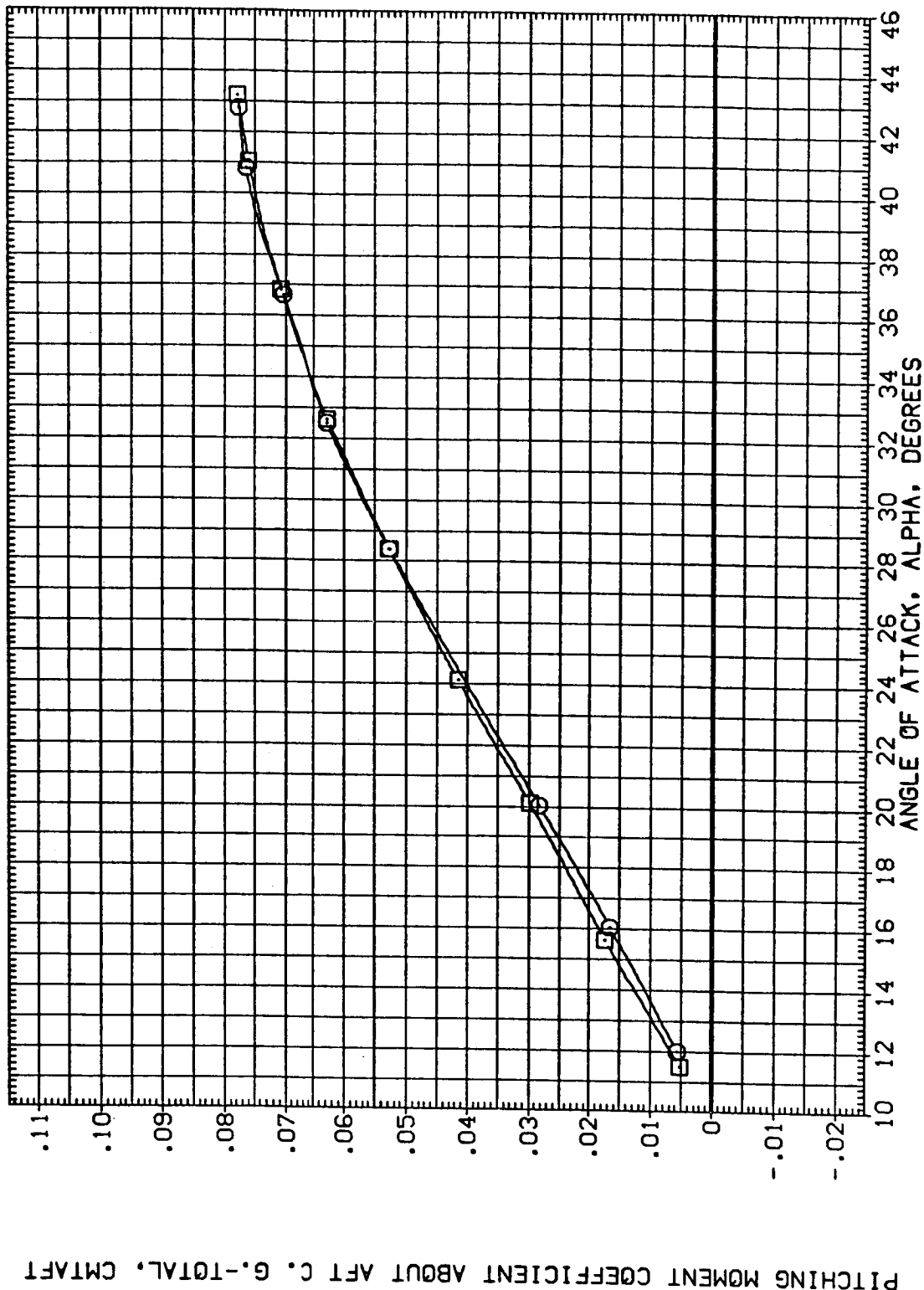


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (E00014) (KE0018) CONFIGURATION DESCRIPTION AMES 3.5-190 GA98 (011-N24+DUMMY STING) AMES 3.5-190 GA98 (011-N7+M14-N24+DUMMY STING) BETA .000 .000 ELEVON -10.000 -10.000 BOFLAP -11.700 -11.700 SPODBK 55.000 55.000 REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP .0000 IN. ZMRP 375.0000 IN. SCALE .0150

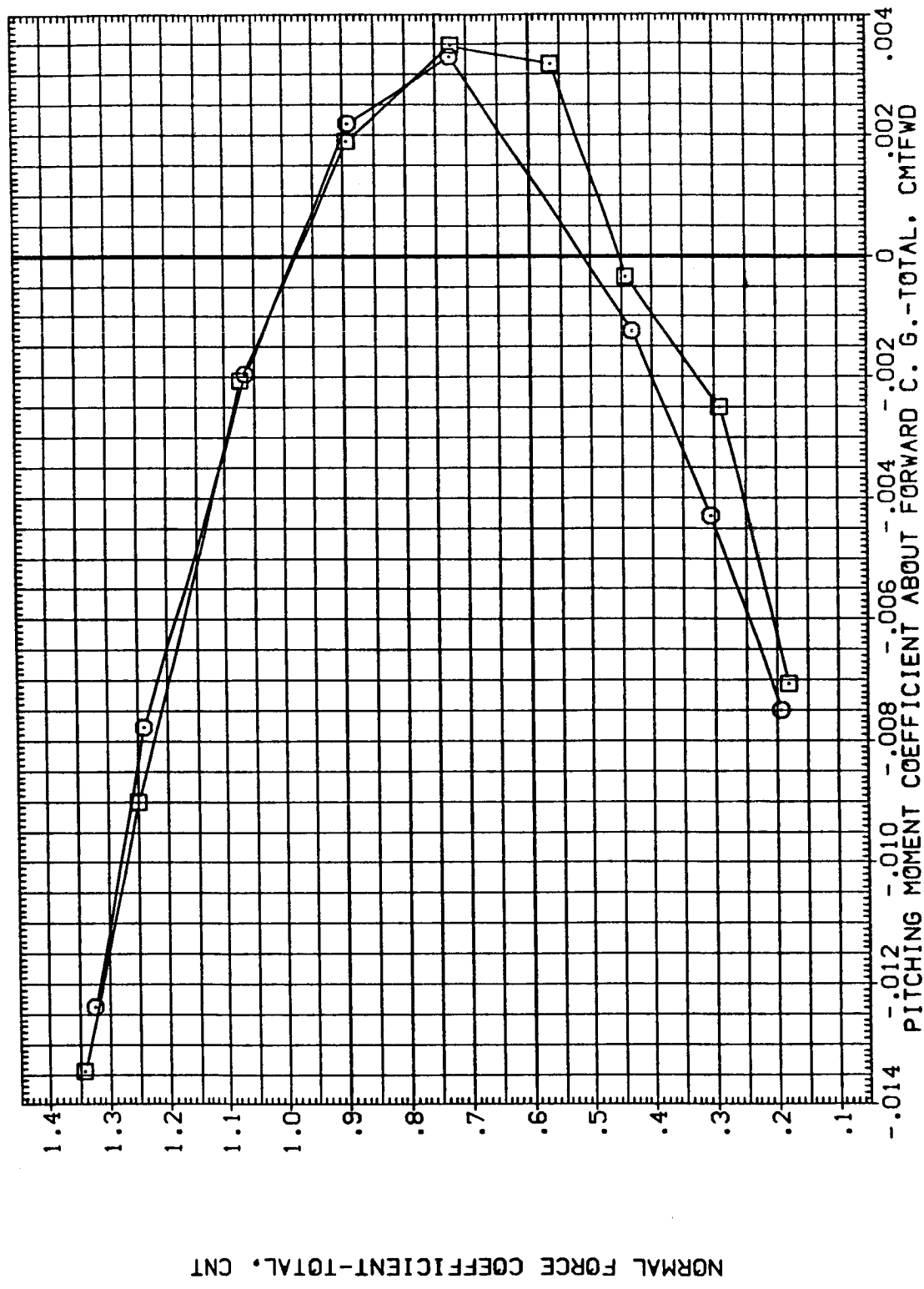


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0014)	AMES 3.5-190 DAY8 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(KE0018)	AMES 3.5-190 DAY8 (011-N7+H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

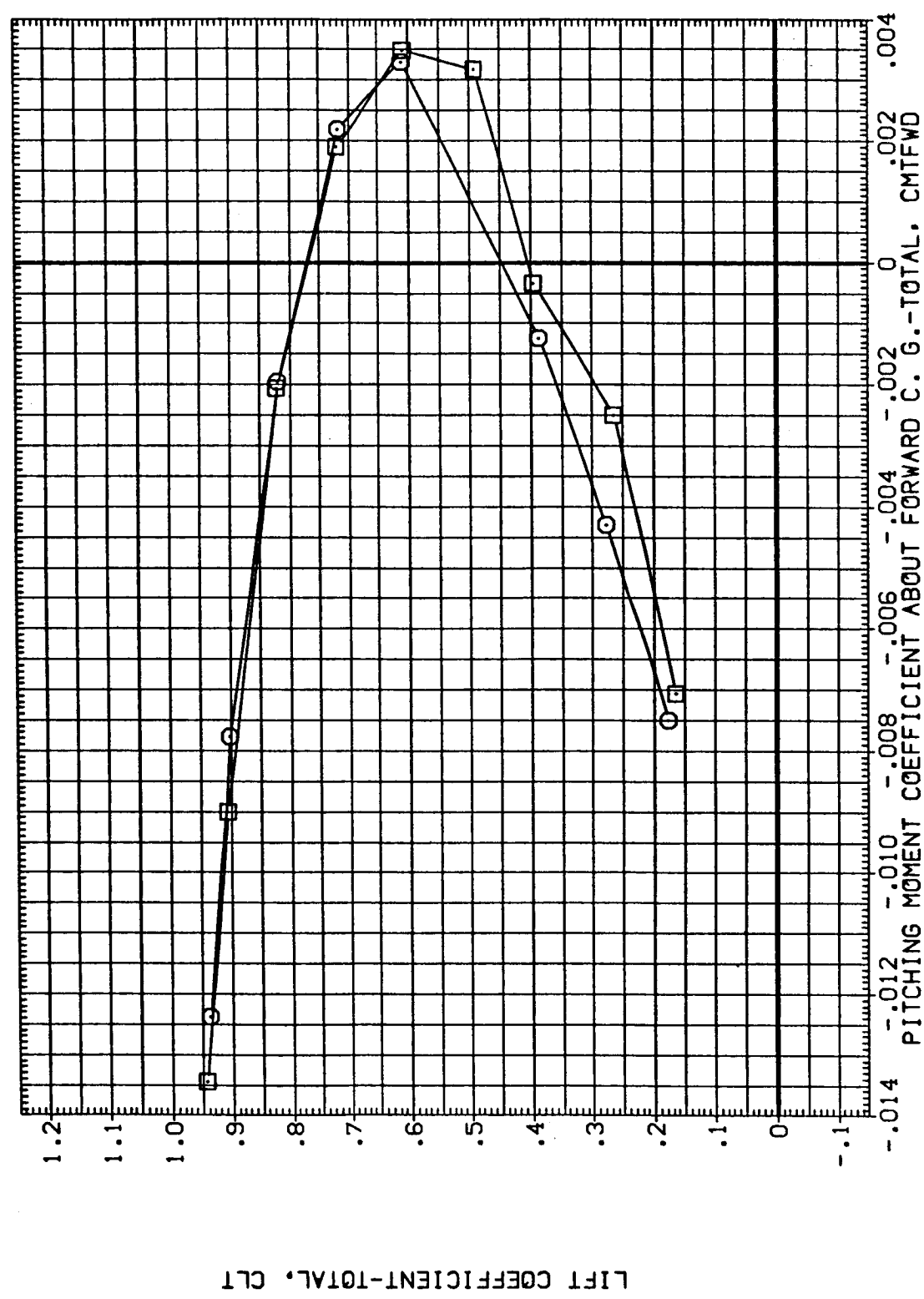


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(EEO14)	AMES 3.5-190 DA98 (011-N24+DUMMY STING)
(KEO18)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

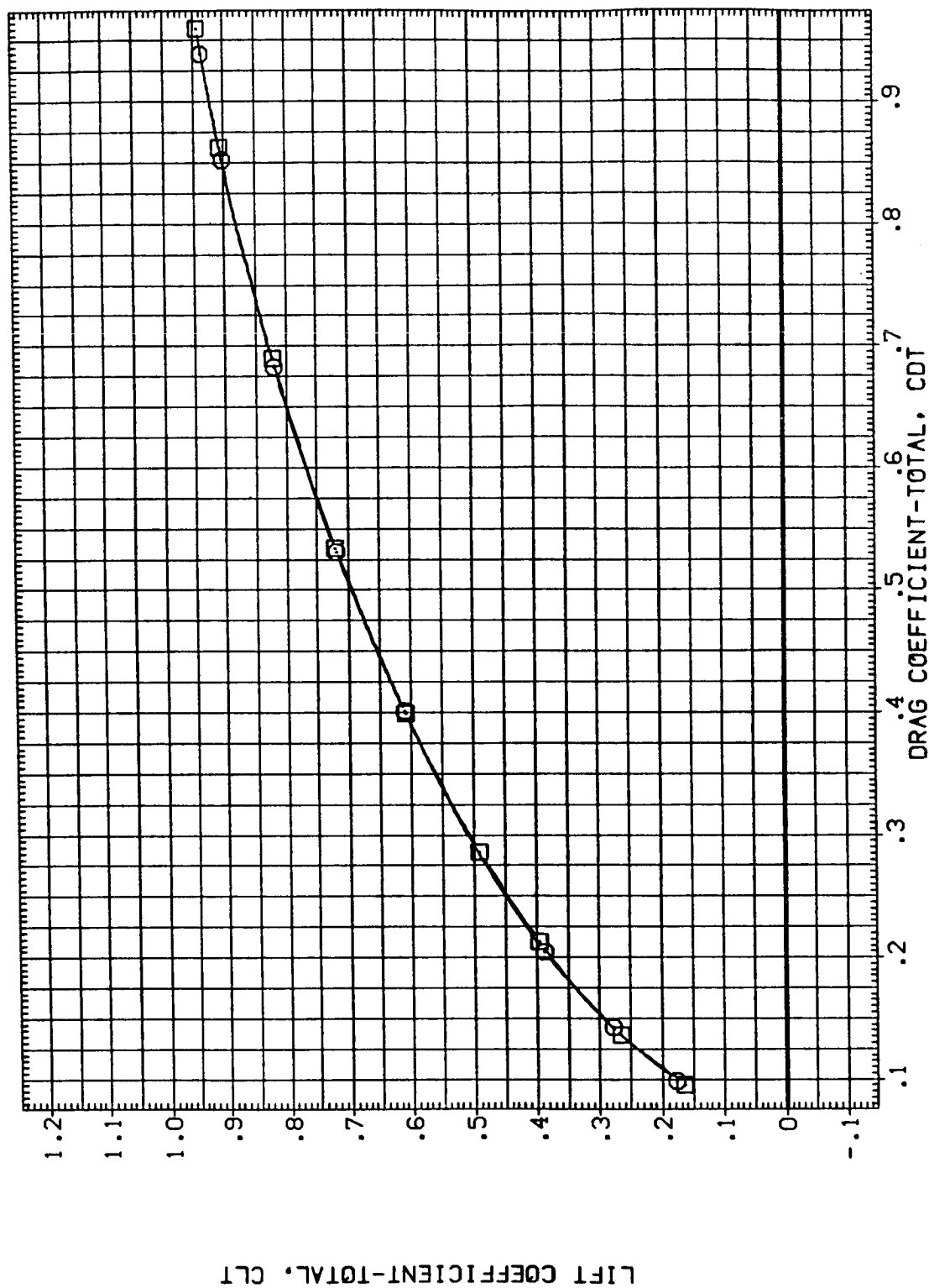


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

$$\{A\}MACH = 5.25$$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(EEO14)	AVES 3.5-190 0A98 (011-N24+DUMMY STING)
(EEO18)	AVES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

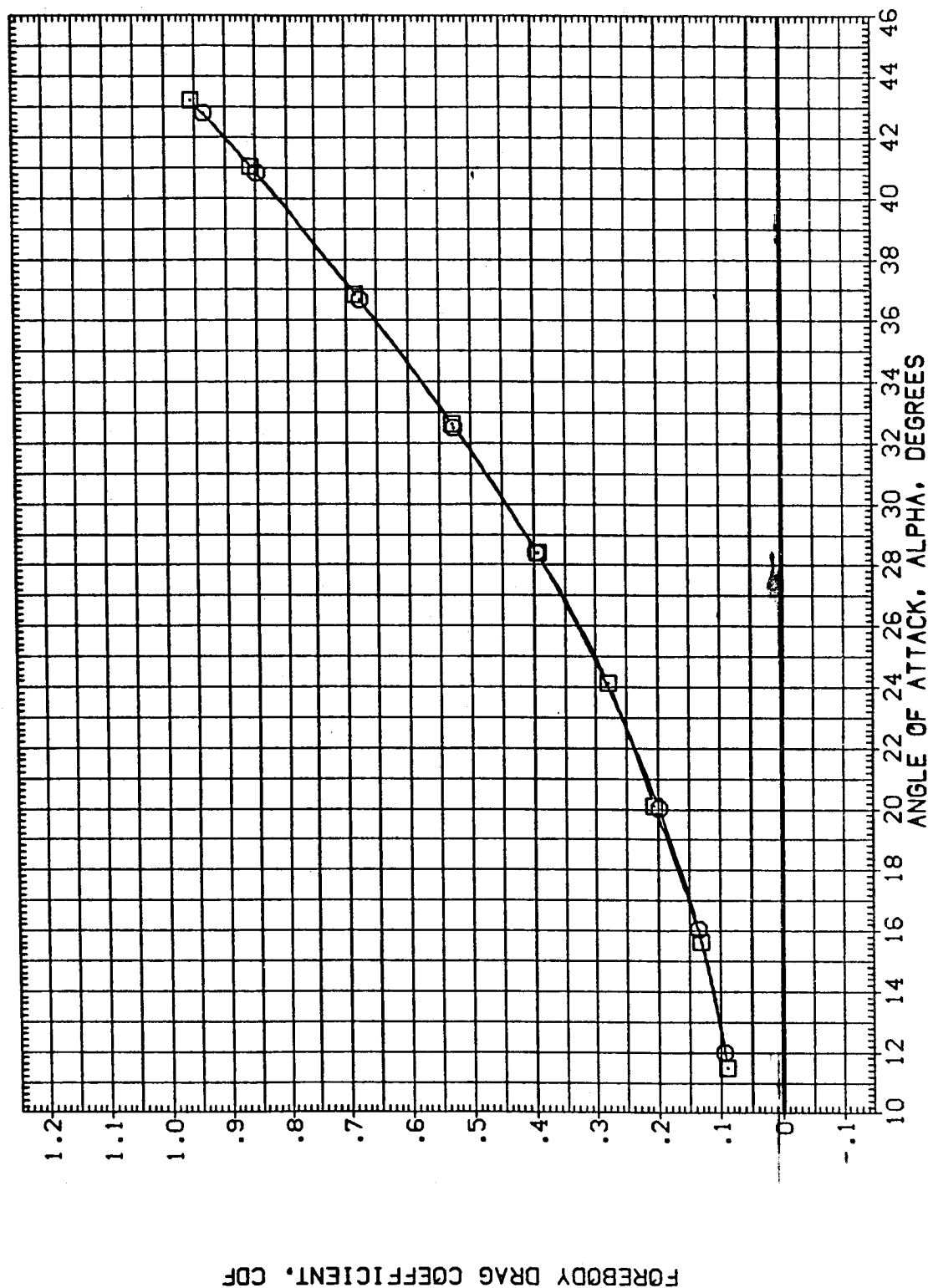


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION	
(EE0014)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF	2650.0000 SQ.FT.
(KE0018)	AMES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF	474.8000 IN.
						BREF	936.6800 IN.
						XMRP	1076.7000 IN.X0
						YMRP	375.0000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

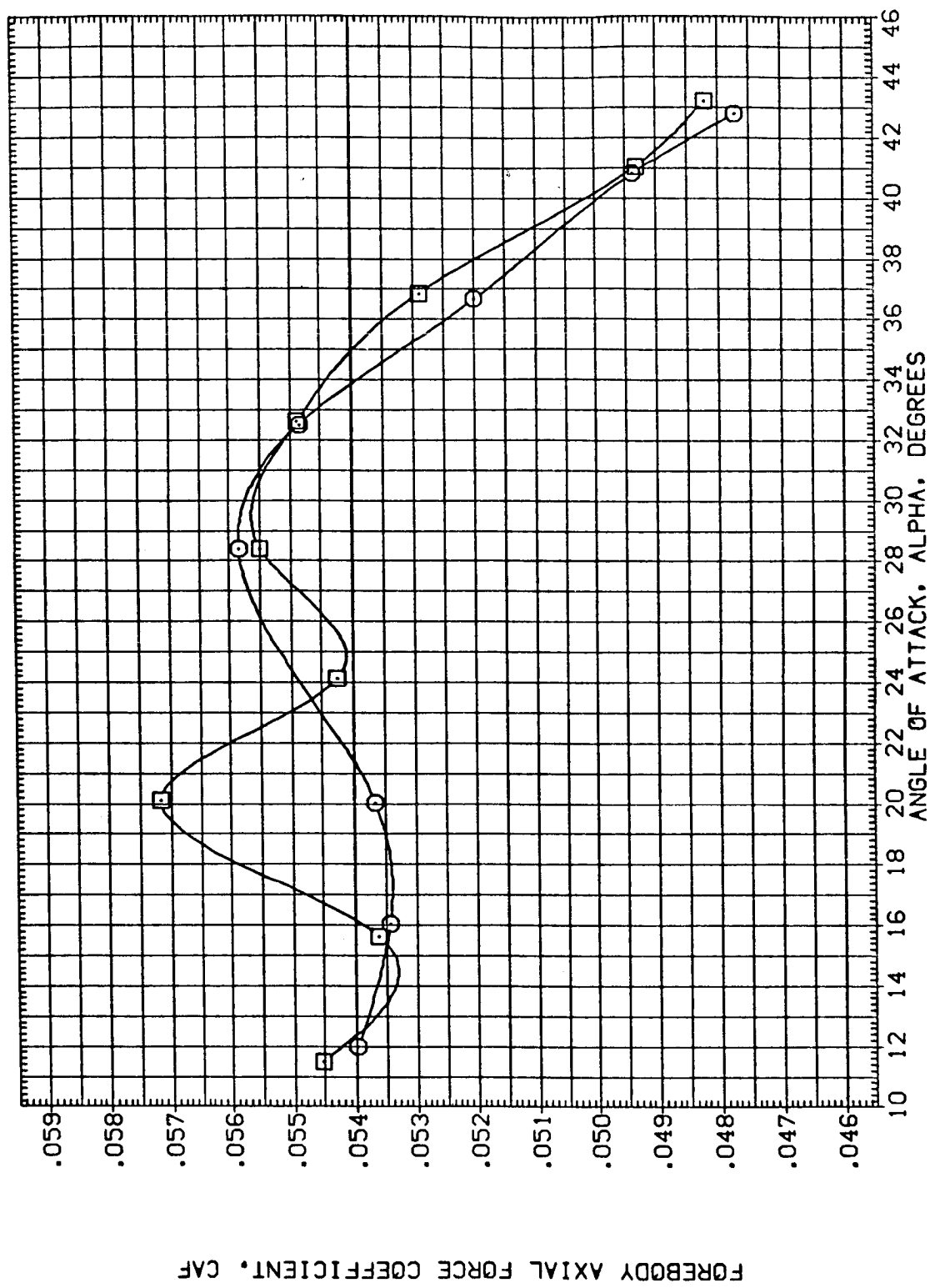


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEQ014)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(KEQ018)	AMES 3.5-190 0A98 (011-N7+H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

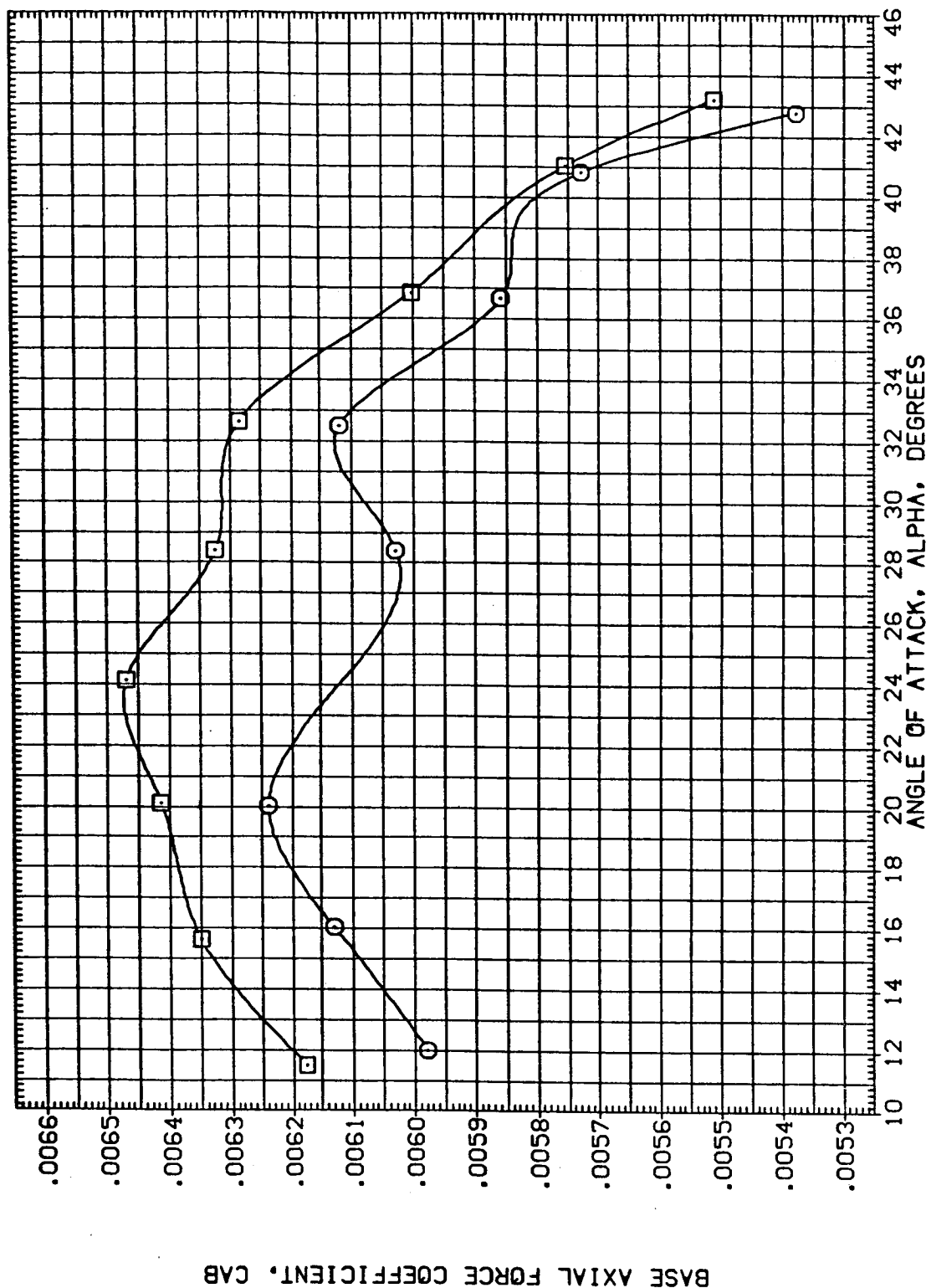


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(BE0014)	□	AMES 3.5-190 OAS8 (011-N24+DUPPY STING)	.000	-10.000	-11.700	55.000	SREF	2690.0000
(IE0018)	□	AMES 3.5-190 OAS8 (011-N7+M14-N24+DUPPY STING)	.000	-10.000	-11.700	55.000	LREF	474.8000
							BREF	936.6800
							XMRP	1076.7000
							YMRP	375.0000
							ZMRP	375.0000
							SCALE	.0150

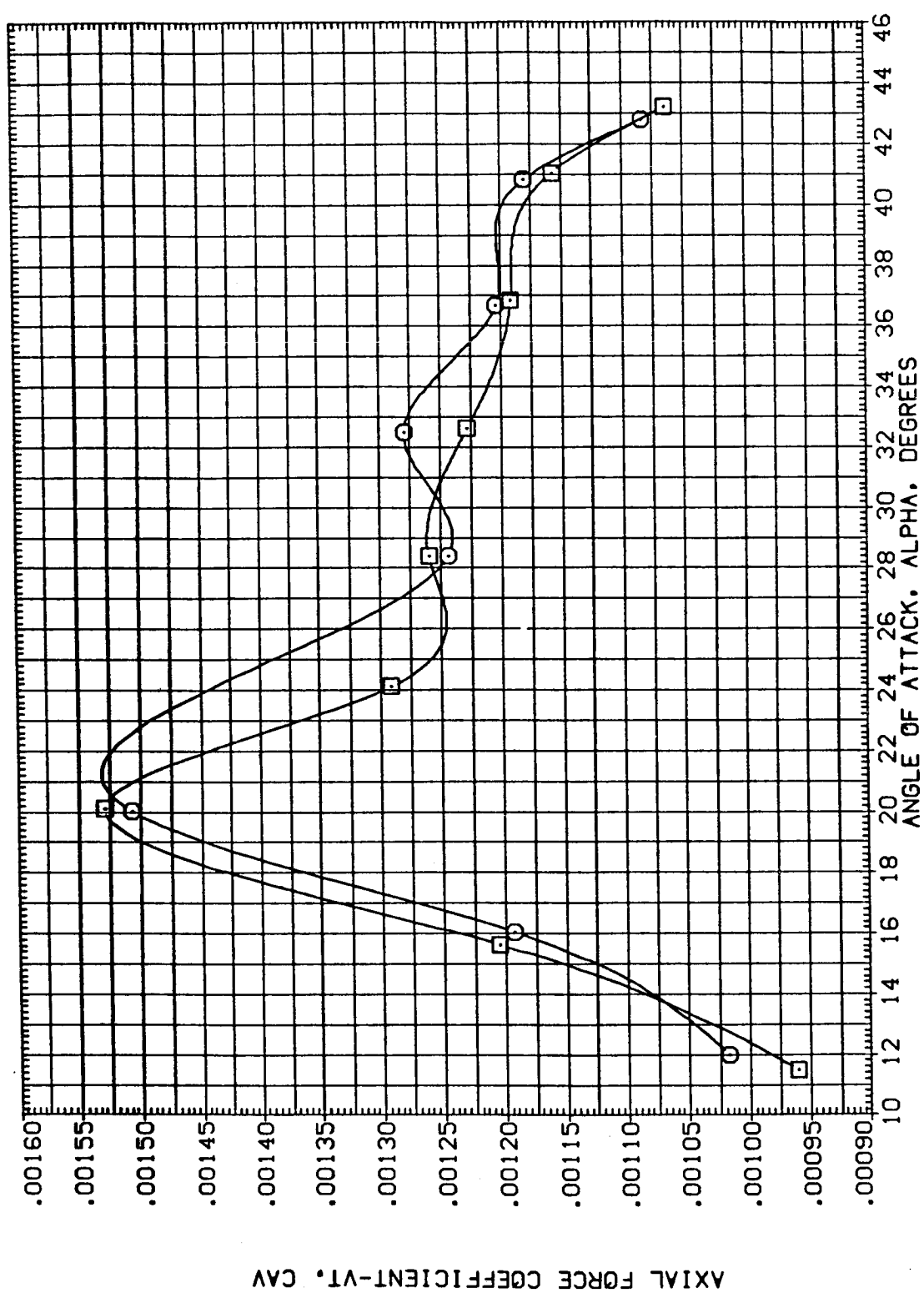


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION	
(BEG014)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(TEG018)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF	474.8000 IN.
						BREF	936.6800 IN.
						XMRP	1076.7000 IN.X0
						YMRP	.0000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

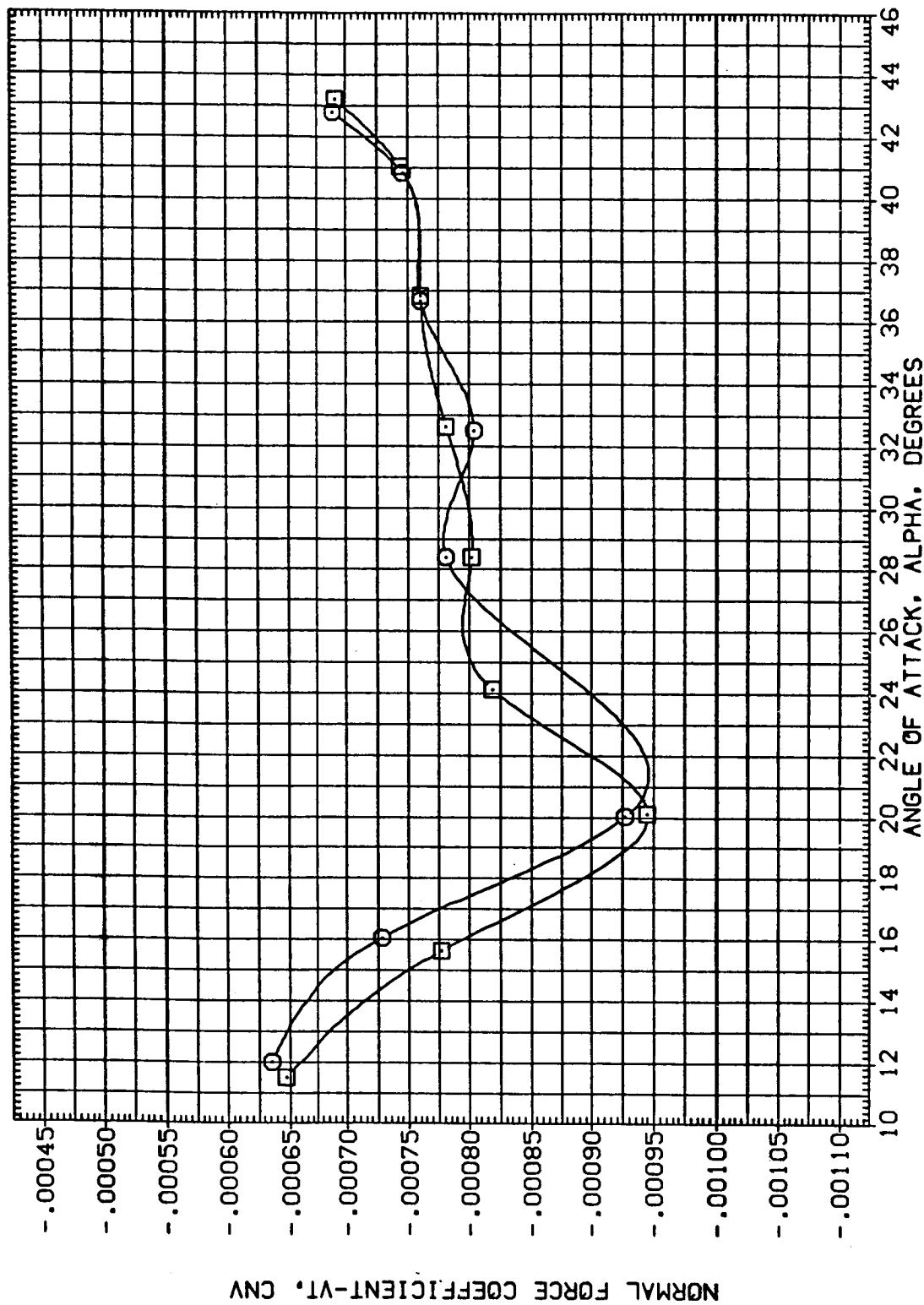


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (1E0018) ☐ (B00014) ☐ CONFIGURATION DESCRIPTION  
 ANES 3.5-190 0A98 (011-N24+DUMMY STING)  
 ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 ELEVON -10.000 BOFLAP -11.700 SPOBRK 55.000  
 .000 -10.000 -11.700 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-VT, CMVFWD

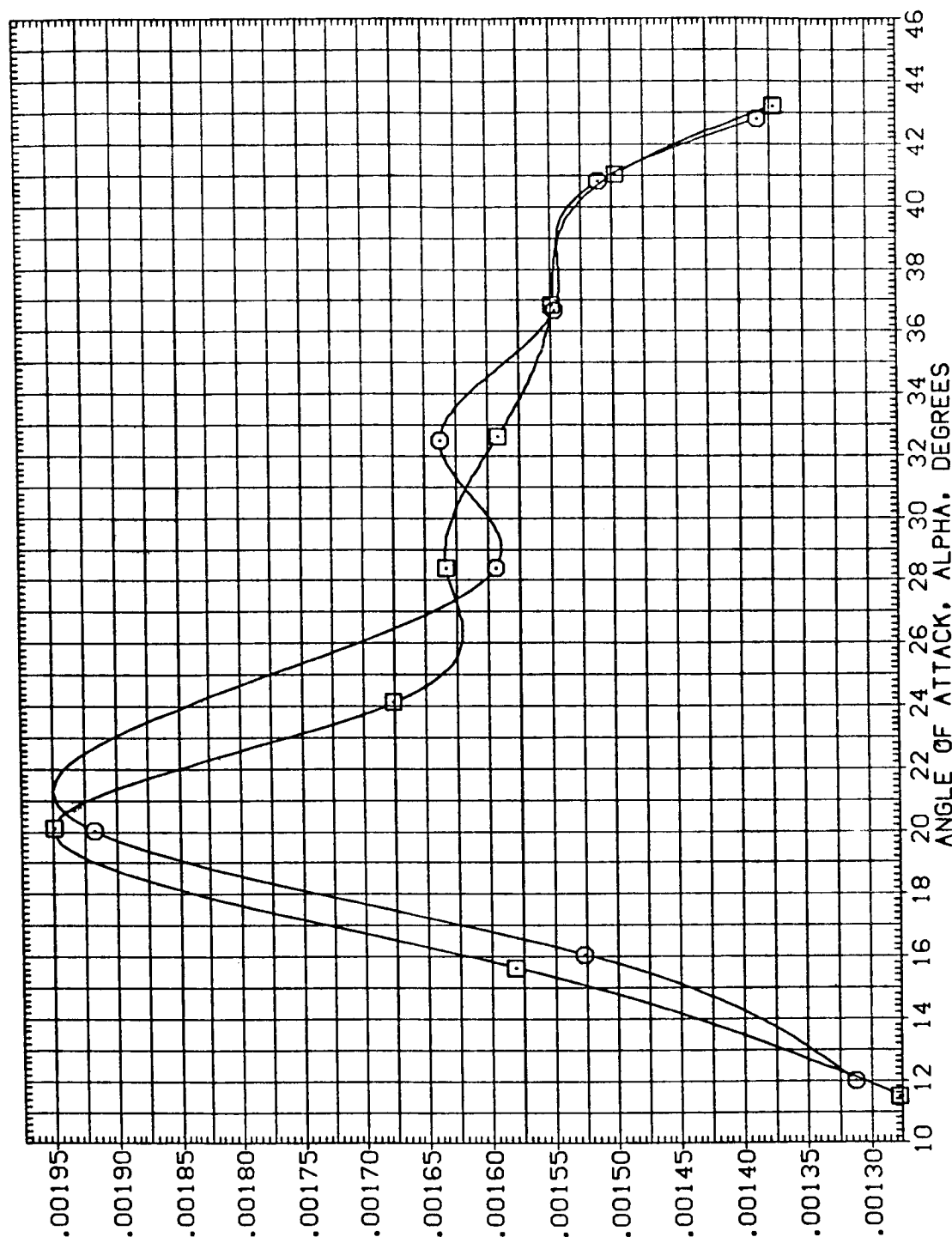


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0014)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(LE0018)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

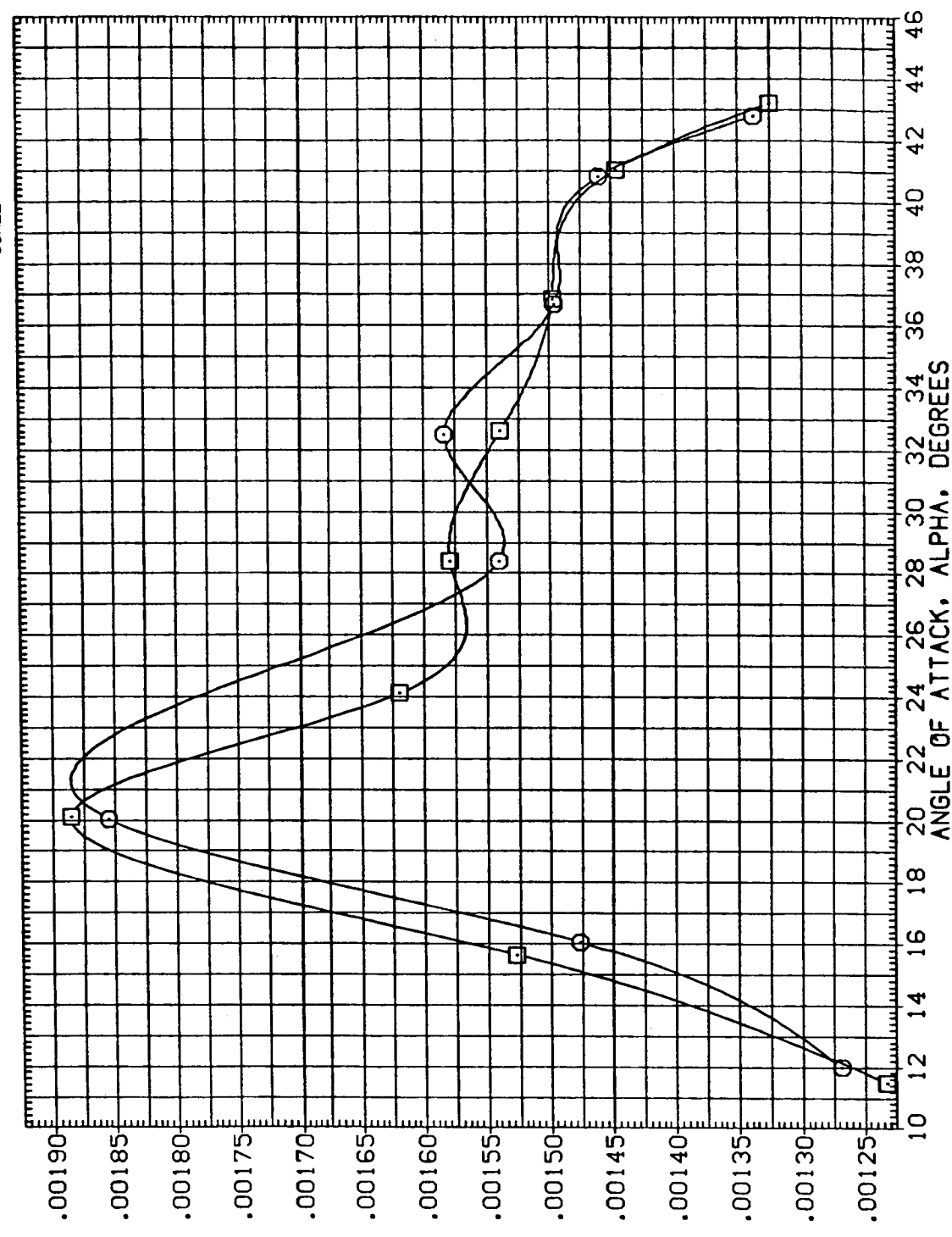


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0015) (J00019)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)

BETA .000  
 ELEVON -40.000  
 BOFLAP -11.700  
 SPDRK 55.000  
 SREF 2690.0000  
 LREF 474.8000  
 BREF 936.6800  
 XMRP 1076.7000  
 YMRP .0000  
 ZMRP 375.0000  
 SCALE .0150

REFERENCE INFORMATION  
 SQ.FT. 2690.0000  
 IN. 474.8000  
 IN.X0 936.6800  
 IN.Y0 1076.7000  
 IN.Z0 .0150

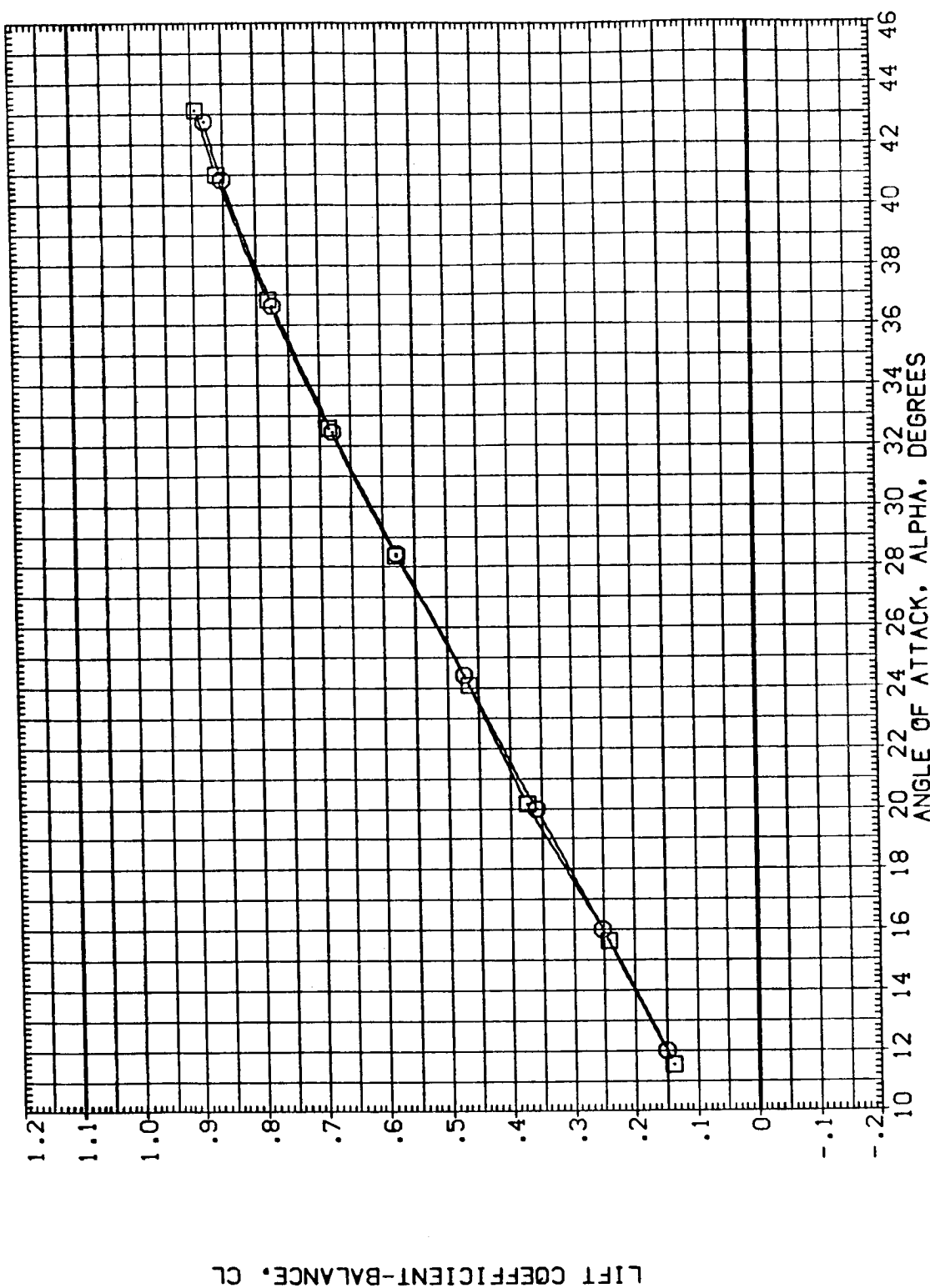


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

( $\alpha$ )MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CEG015)	AMES 3.5-190 DAY8 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(JEG0019)	AMES 3.5-190 DAY8 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 836.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

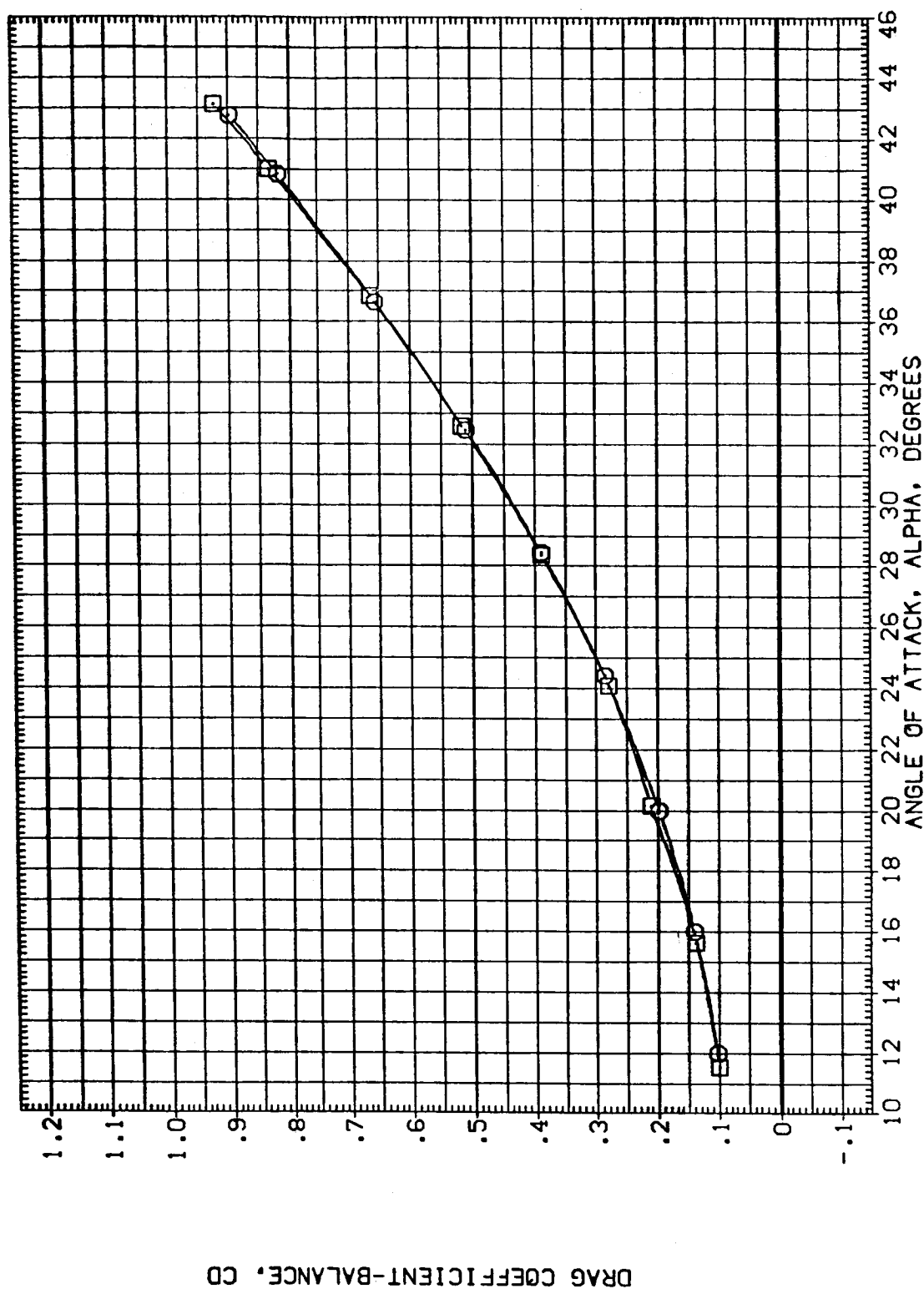


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

( $\alpha$ )MACH = 5.25

DATA SET SYMBOL (CE0015) (JE0019)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000  
 ELEVON -40.000  
 BOFLAP -11.700

SPOBRK SPOBRK  
 55.000 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

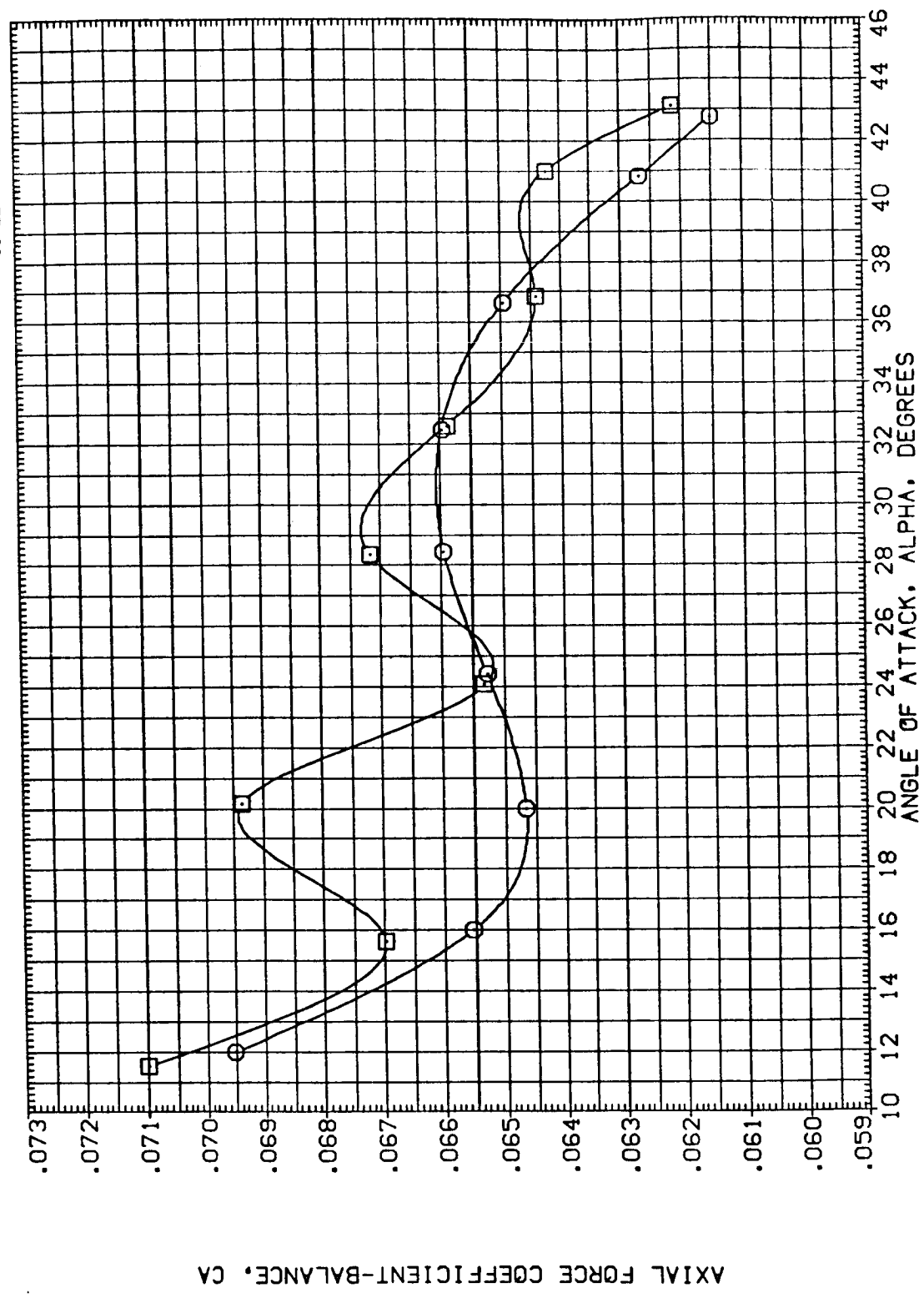


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CEQ015)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(JEG019)	AMES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

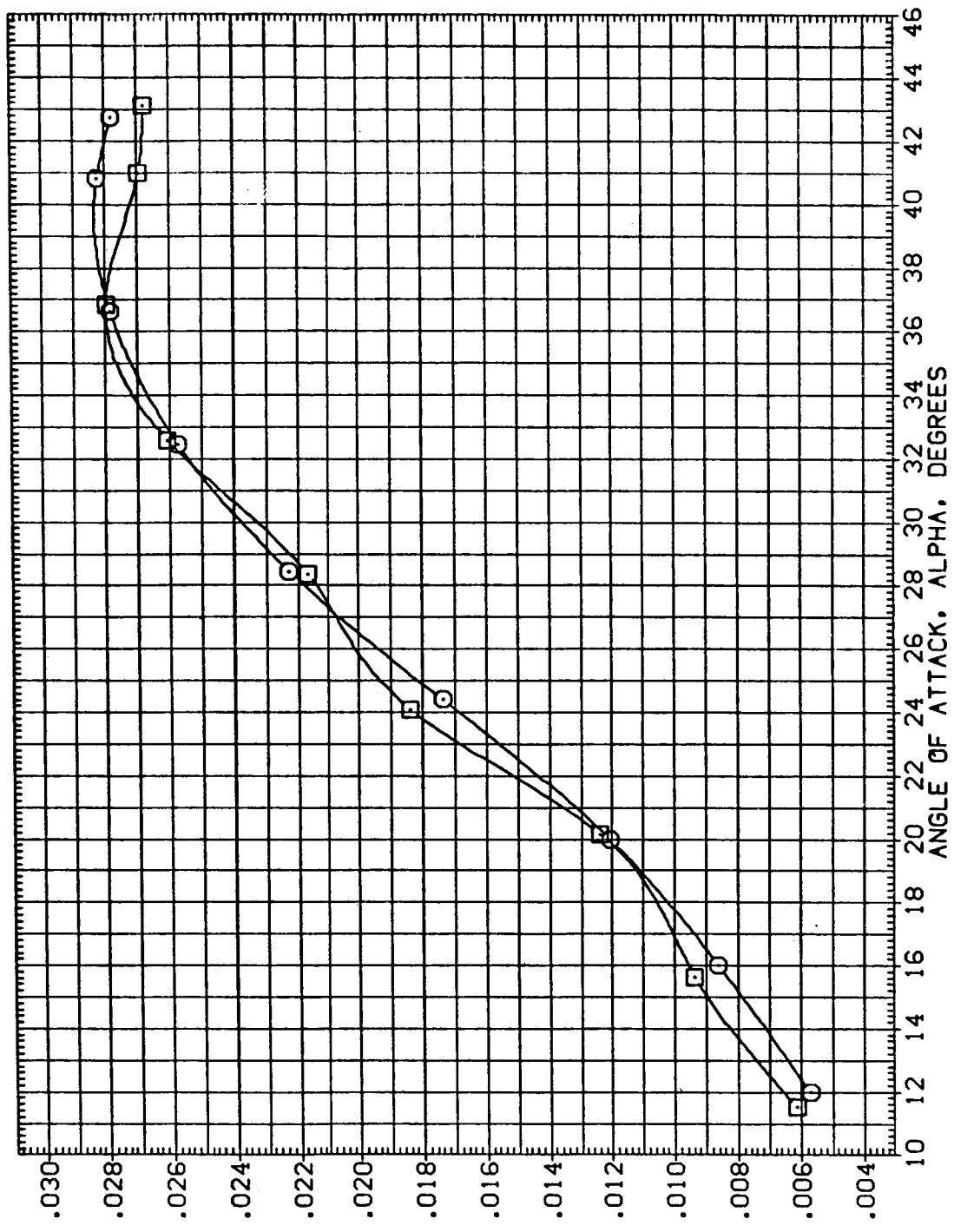



FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE001S)  (JE001S)

CONFIGURATION DESCRIPTION  
 AVES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000  
 .000

ELEVON -40.000  
 -40.000

BDF LAP -11.700  
 -11.700

SPODBK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

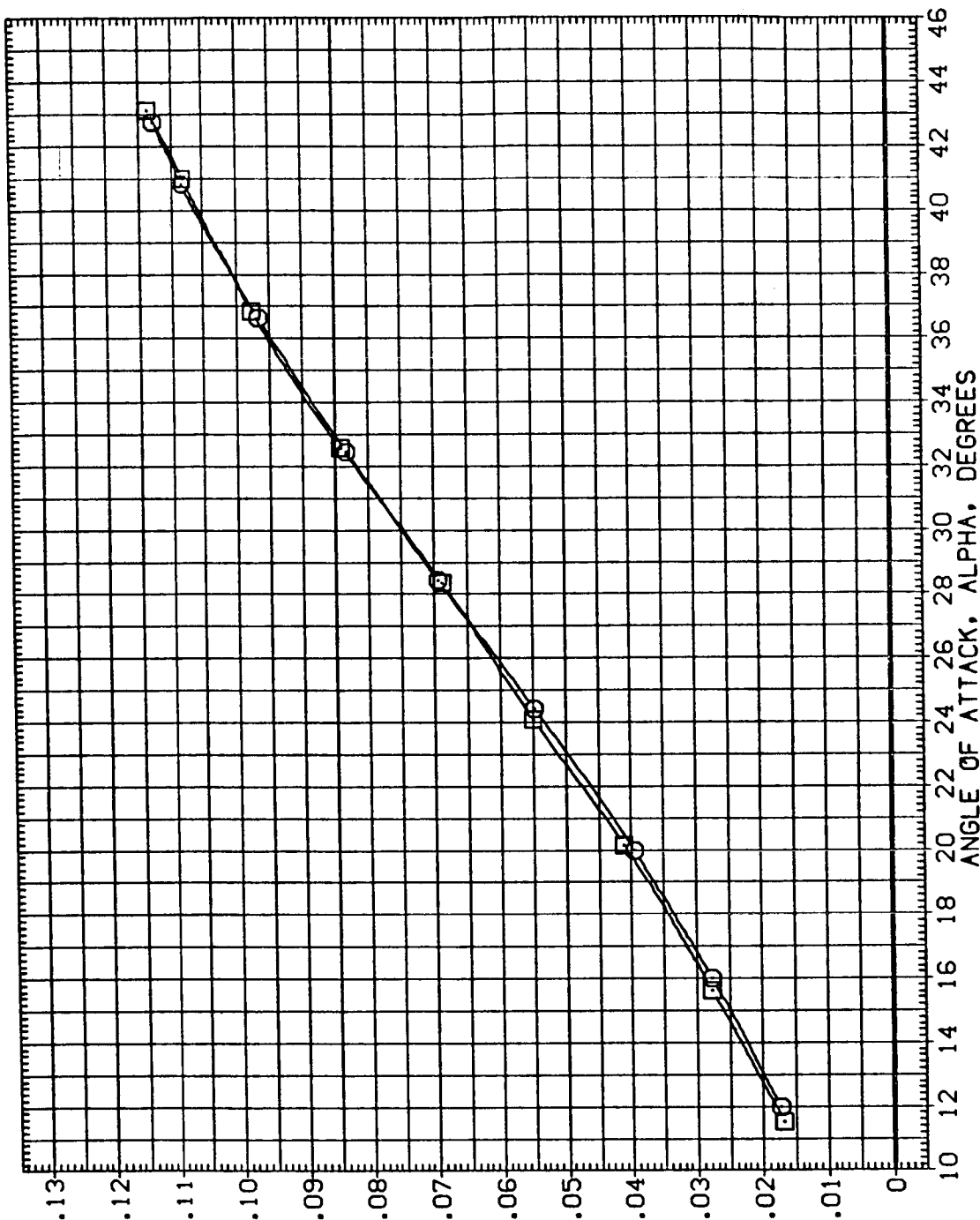


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(CE0015)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(JE0019)	AMES 3.5-190 0A98 (011-N7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

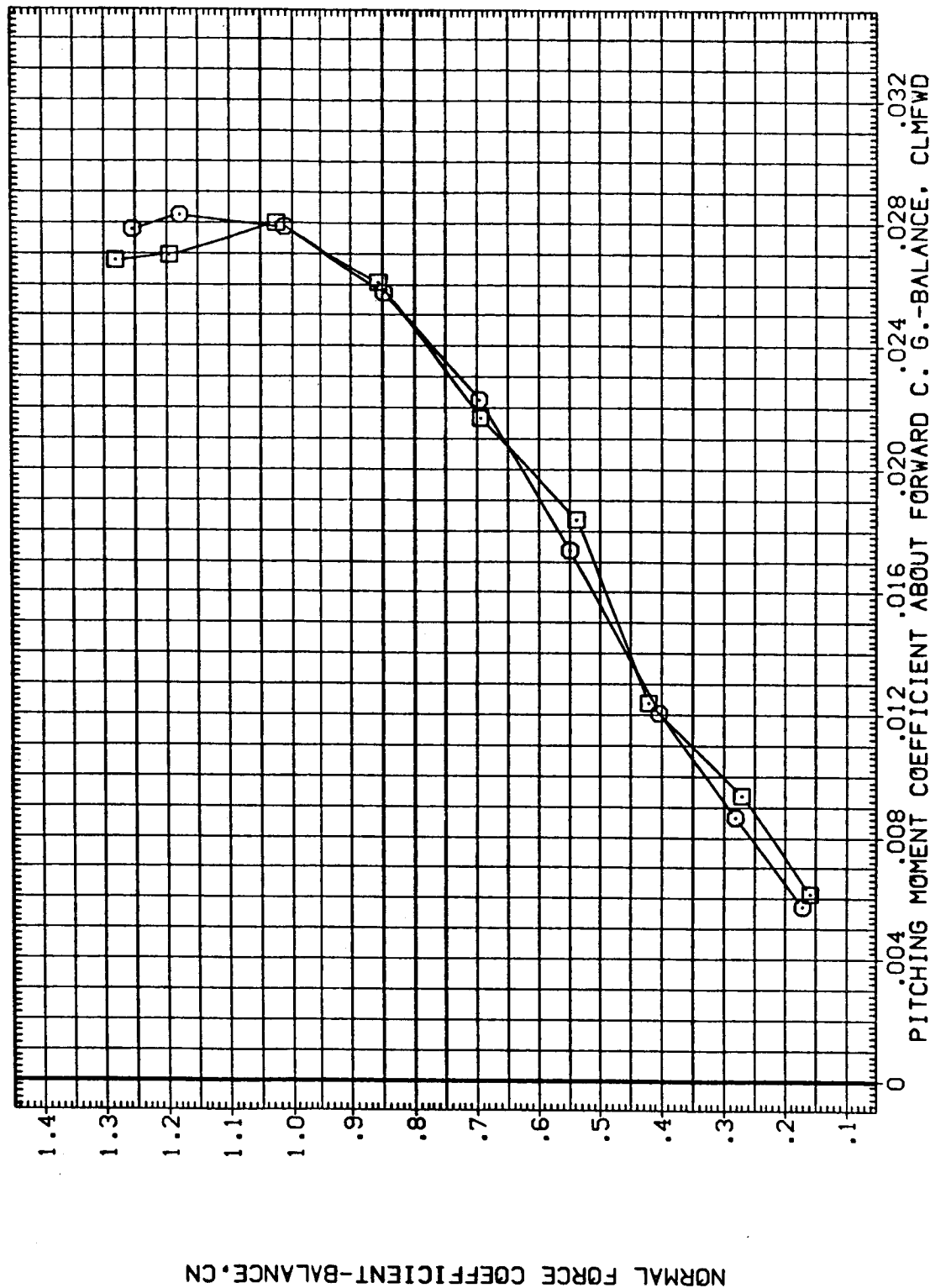


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CAJMACB = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CED015)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(JED019)	AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XG
						YMRP .0000 IN.YG
						ZMRP 375.0000 IN.ZG
						SCALE .0150

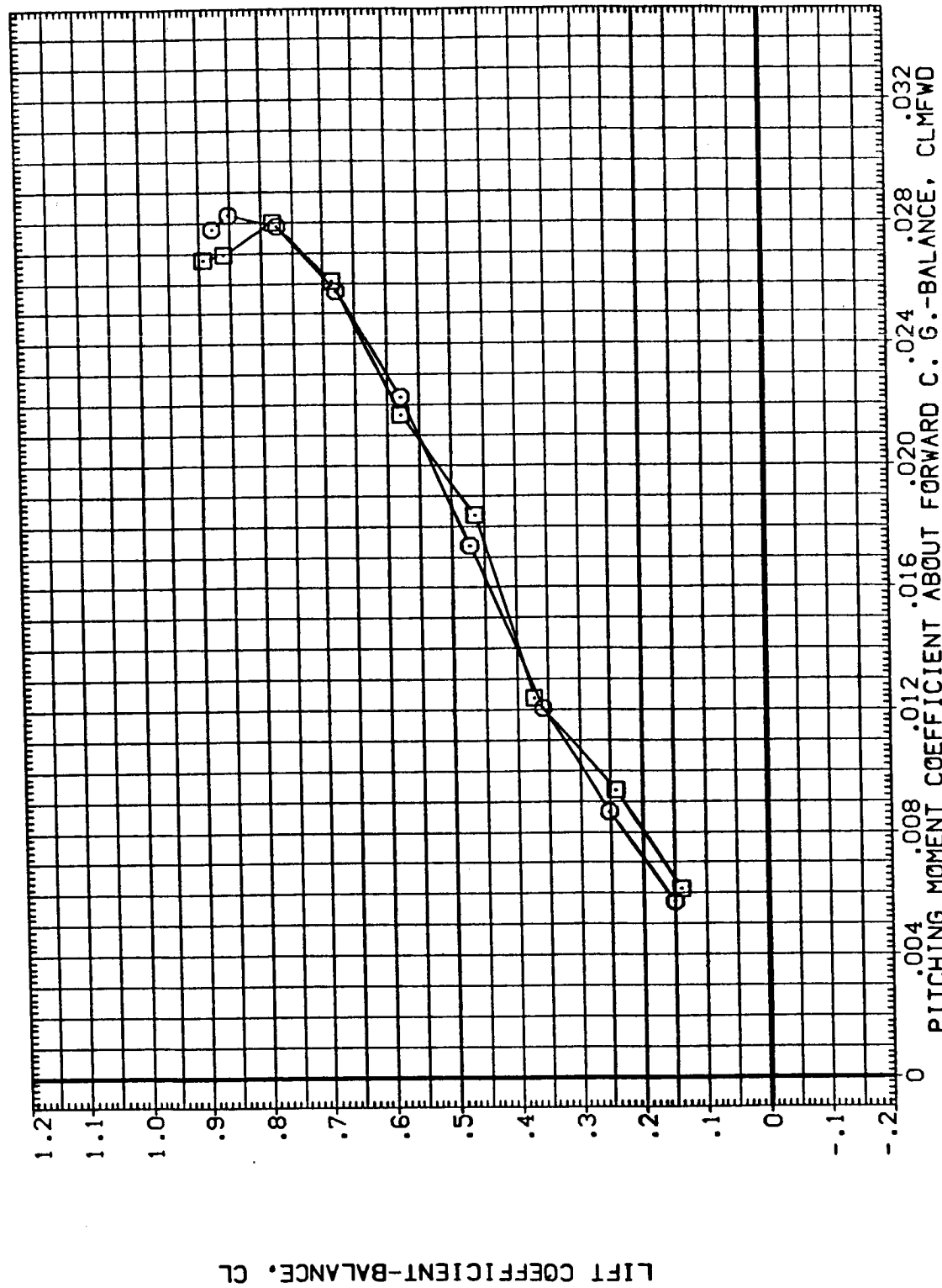


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CEG015)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(JEG019)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

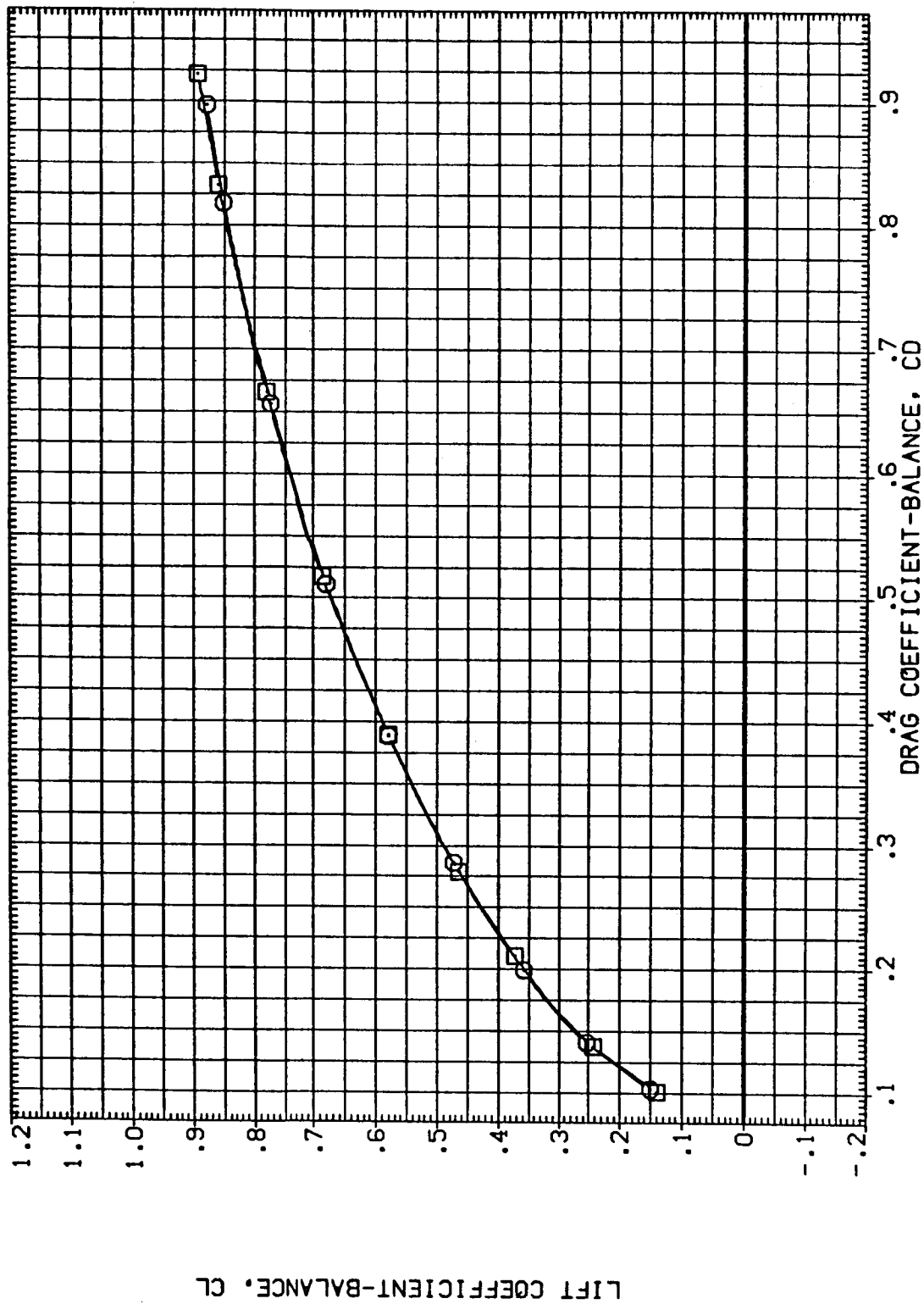


FIG. 6 LONGITUDINAL EFFECT OF QMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0015) (KE0019)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-N7+M14-N24+DUPPY STING)

BETA .000  
 .000

ELEVON BOFLAP SPOBRK  
 -40.000 -11.700 55.000  
 -40.000 -11.700 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

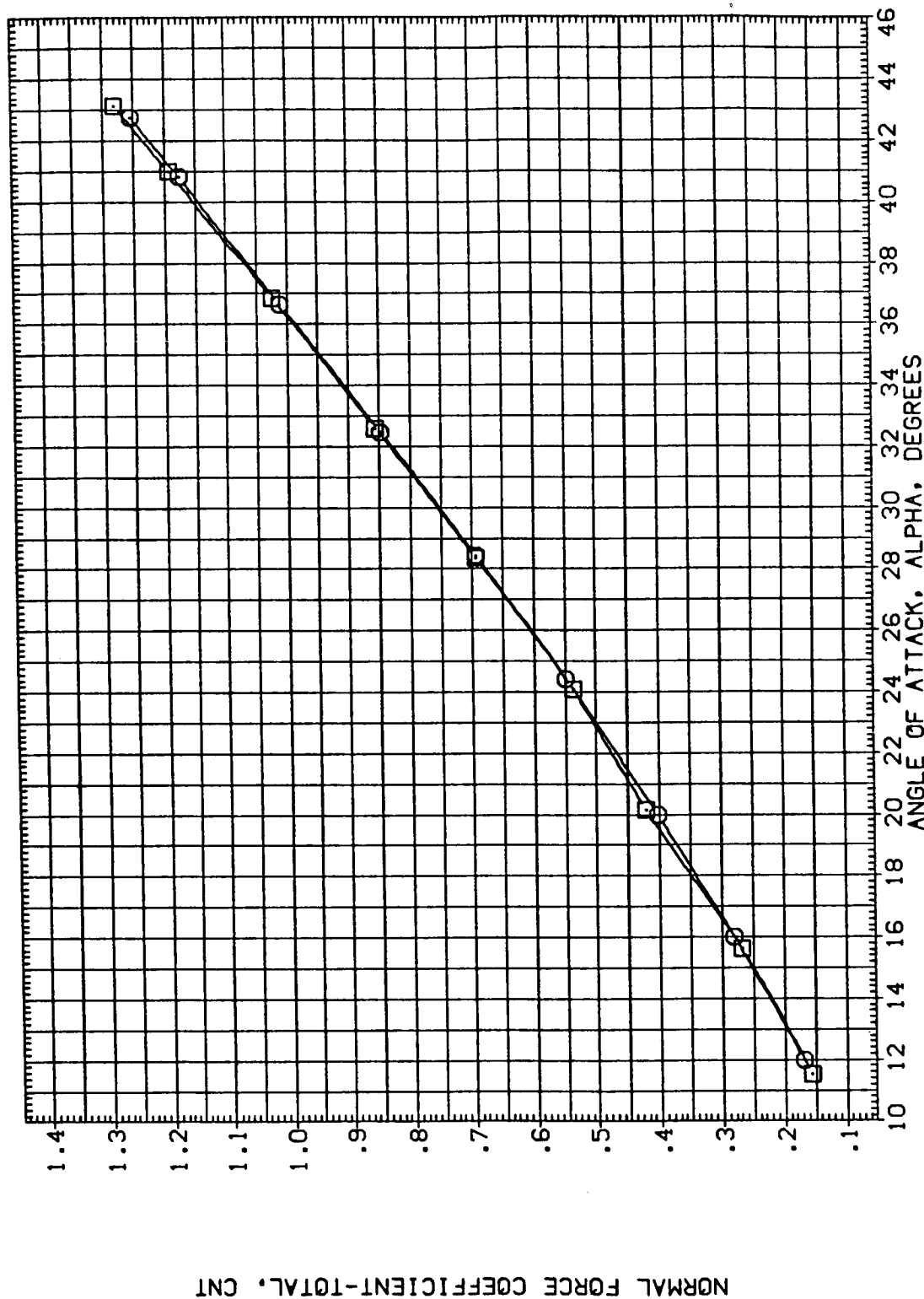


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL  
(CE0015)  
(KE0019)

CONFIGURATION DESCRIPTION  
ANES 3.5-190 0A98 (011-N24+DUMMY STING)  
ANES 3.5-190 0A98 (011-N7+14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
-40.000  
-40.000

BOFLAP  
-11.700  
-11.700

SPOBRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6000 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

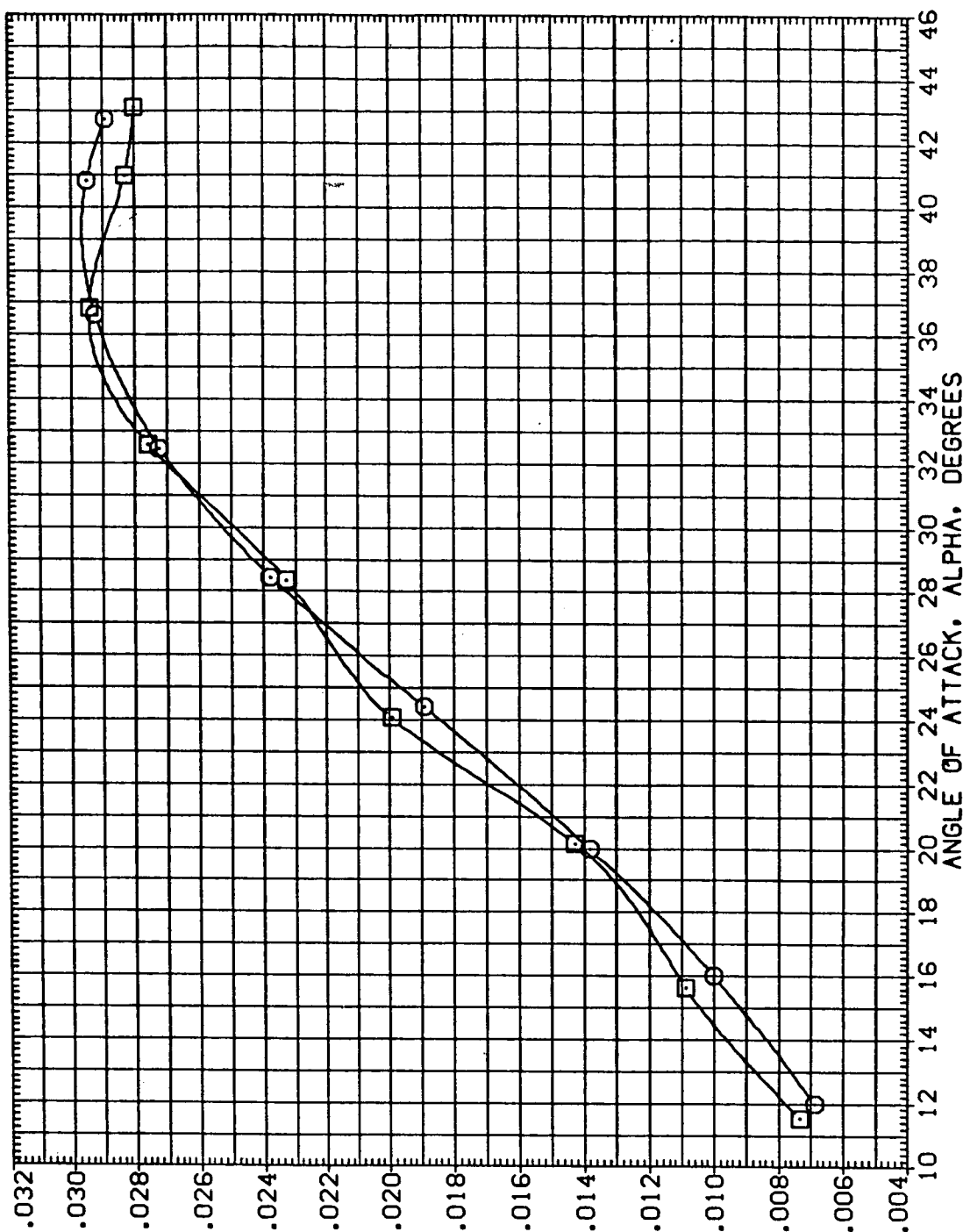


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION	
(EE0015)	AVES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(KE0019)	AVES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF	474.8000 IN.
						BREF	936.6800 IN.
						YMRP	1076.7000 IN.
						ZMRP	375.0000 IN.
						SCALE	.0150 IN.

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-TOTAL, CMTAFT

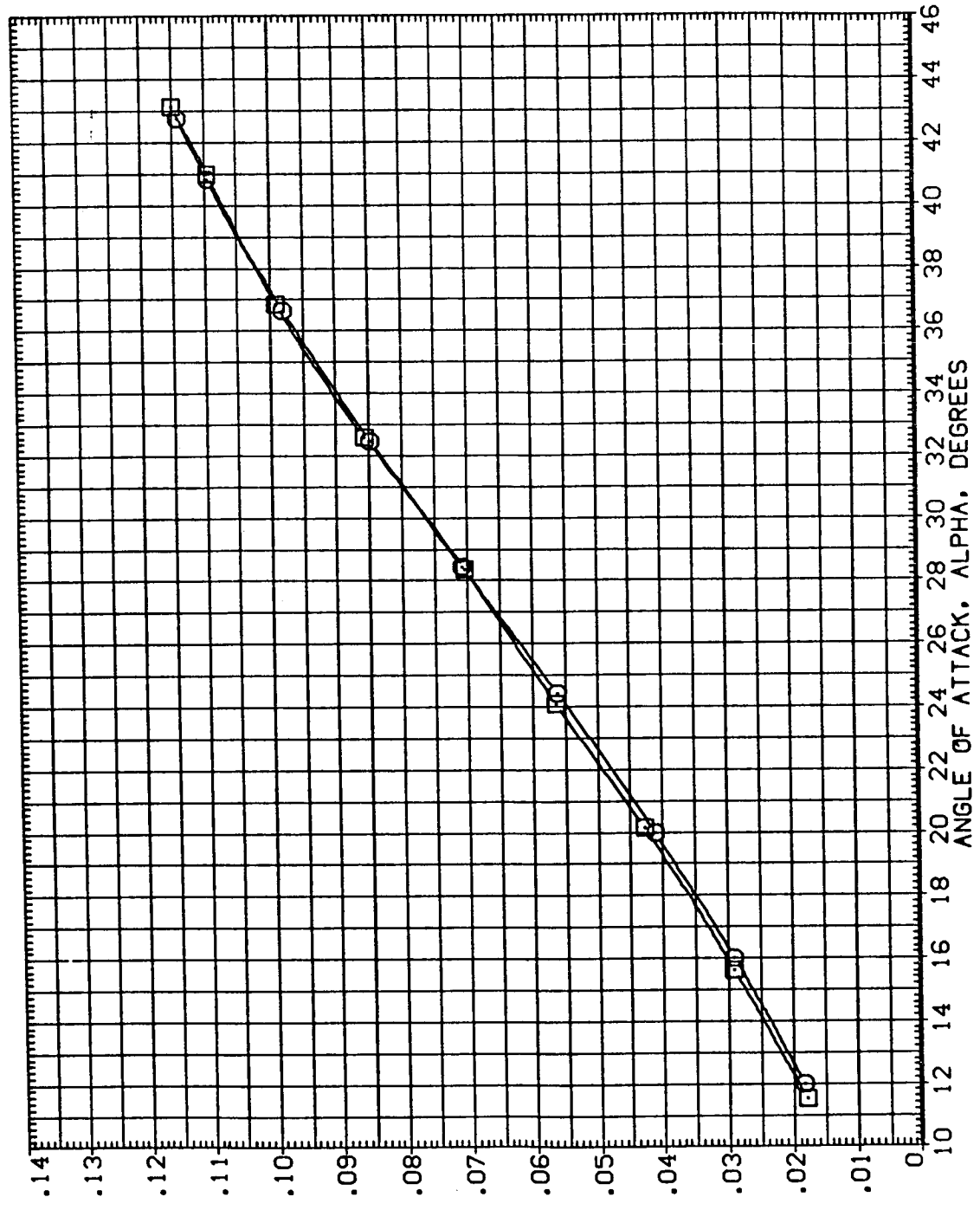


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EEQ015)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(KEQ019)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XG
						YMRP .0000 IN.YG
						ZMRP 375.0000 IN.ZG
						SCALE .0150

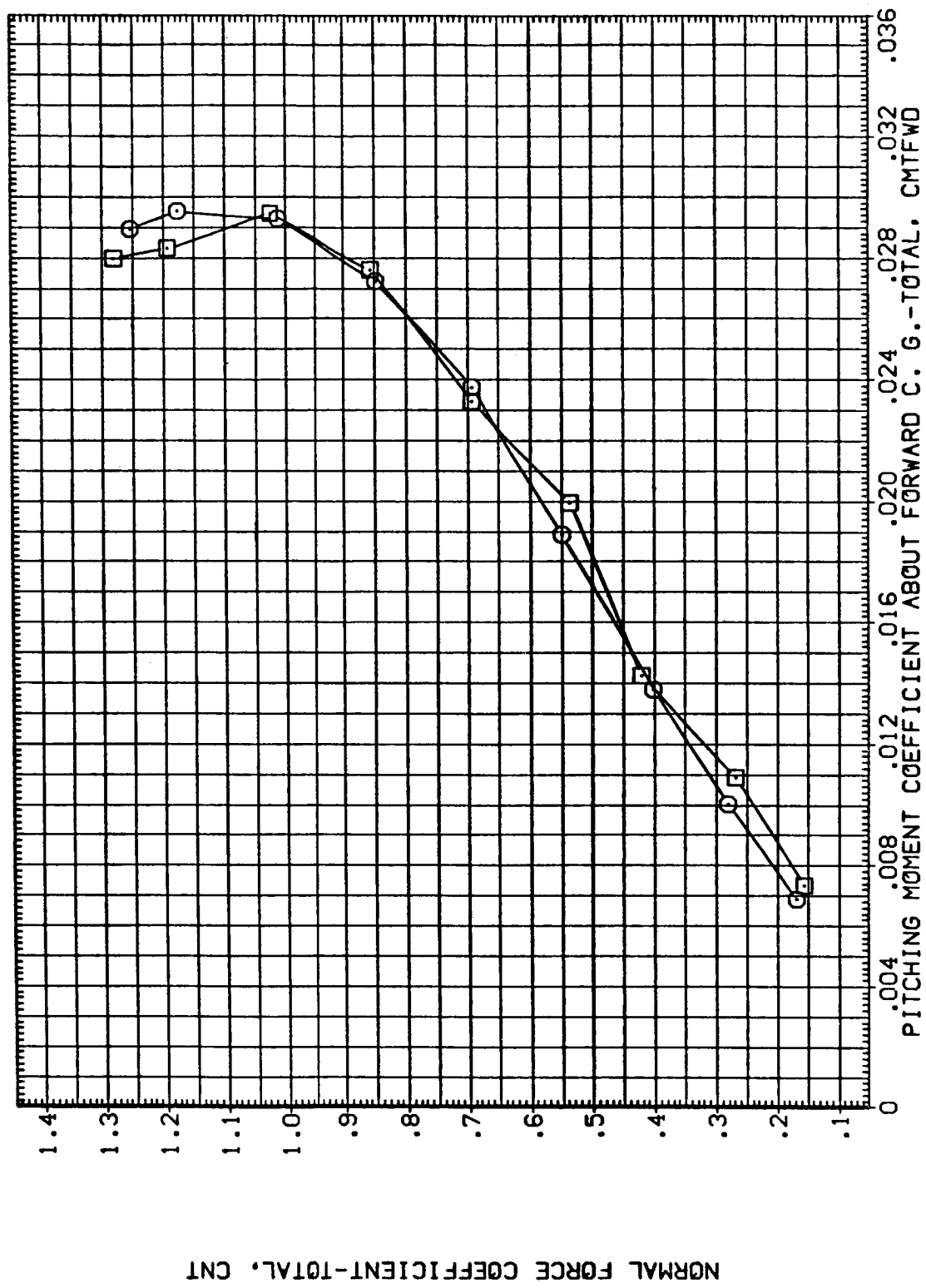


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0015)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(KE0019)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

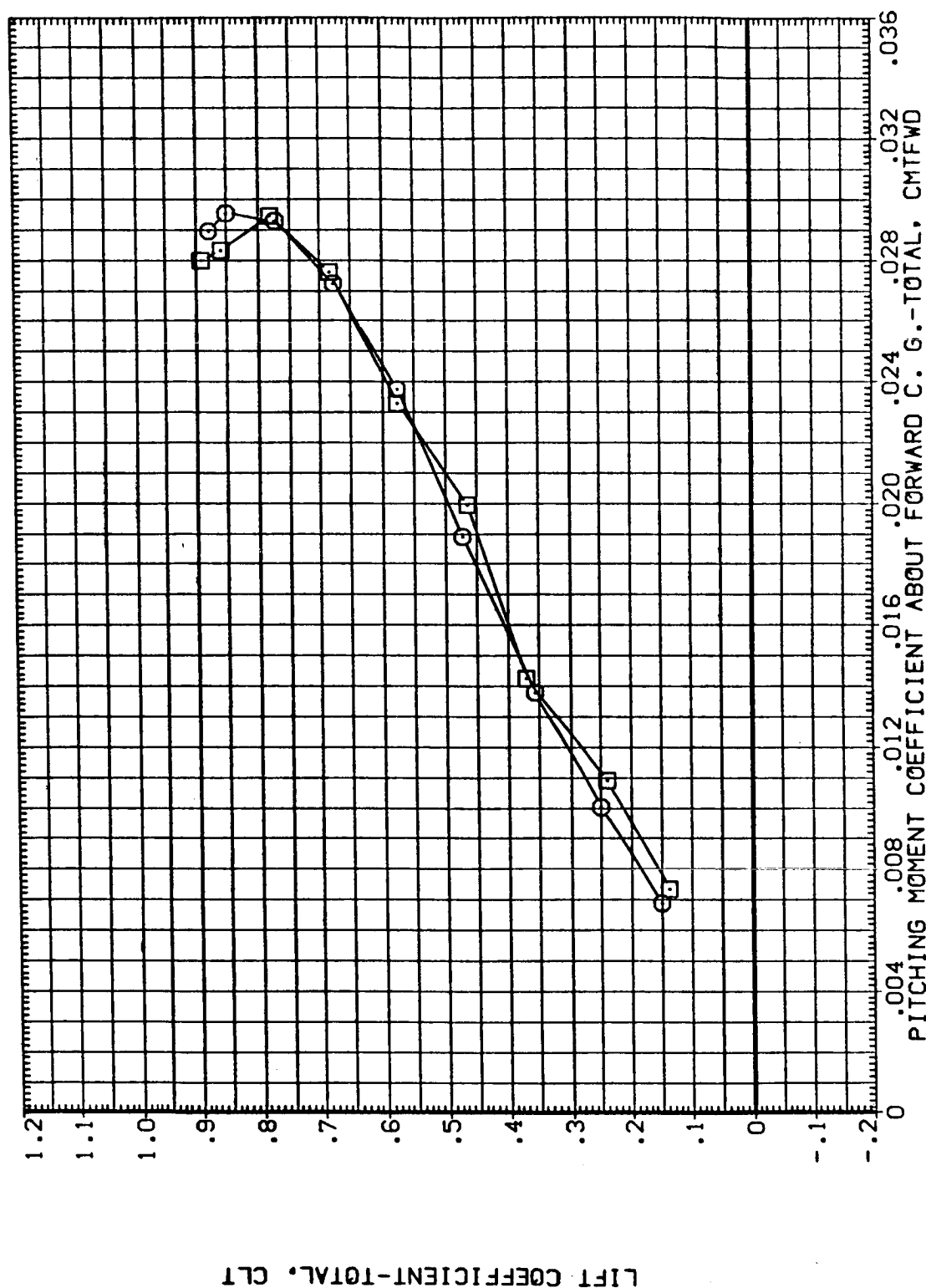


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(E0015)	AVES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(K0019)	AVES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

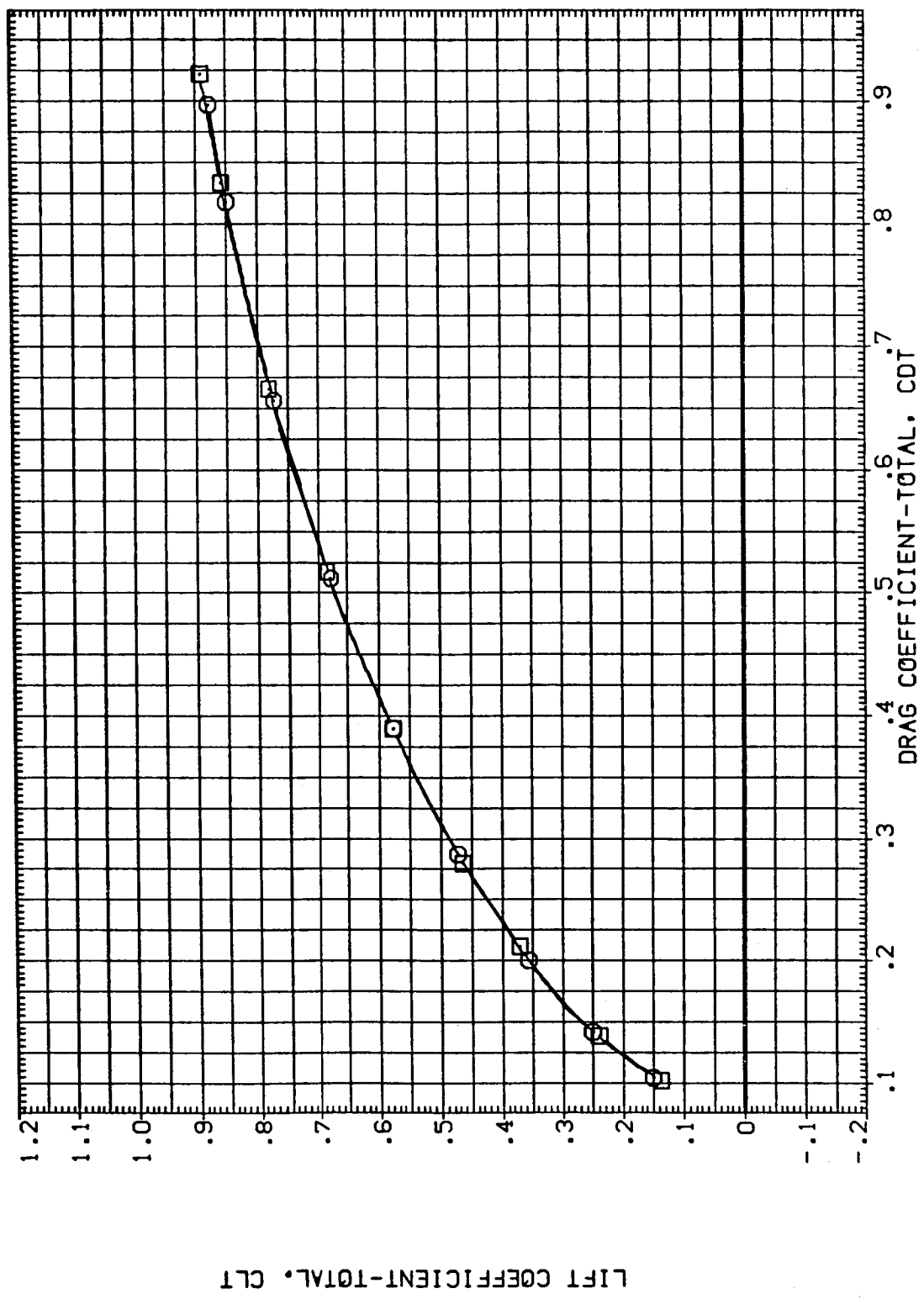


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CA/MACH = 5.25

C-4

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEG015)	AVES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(KEG019)	AVES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150

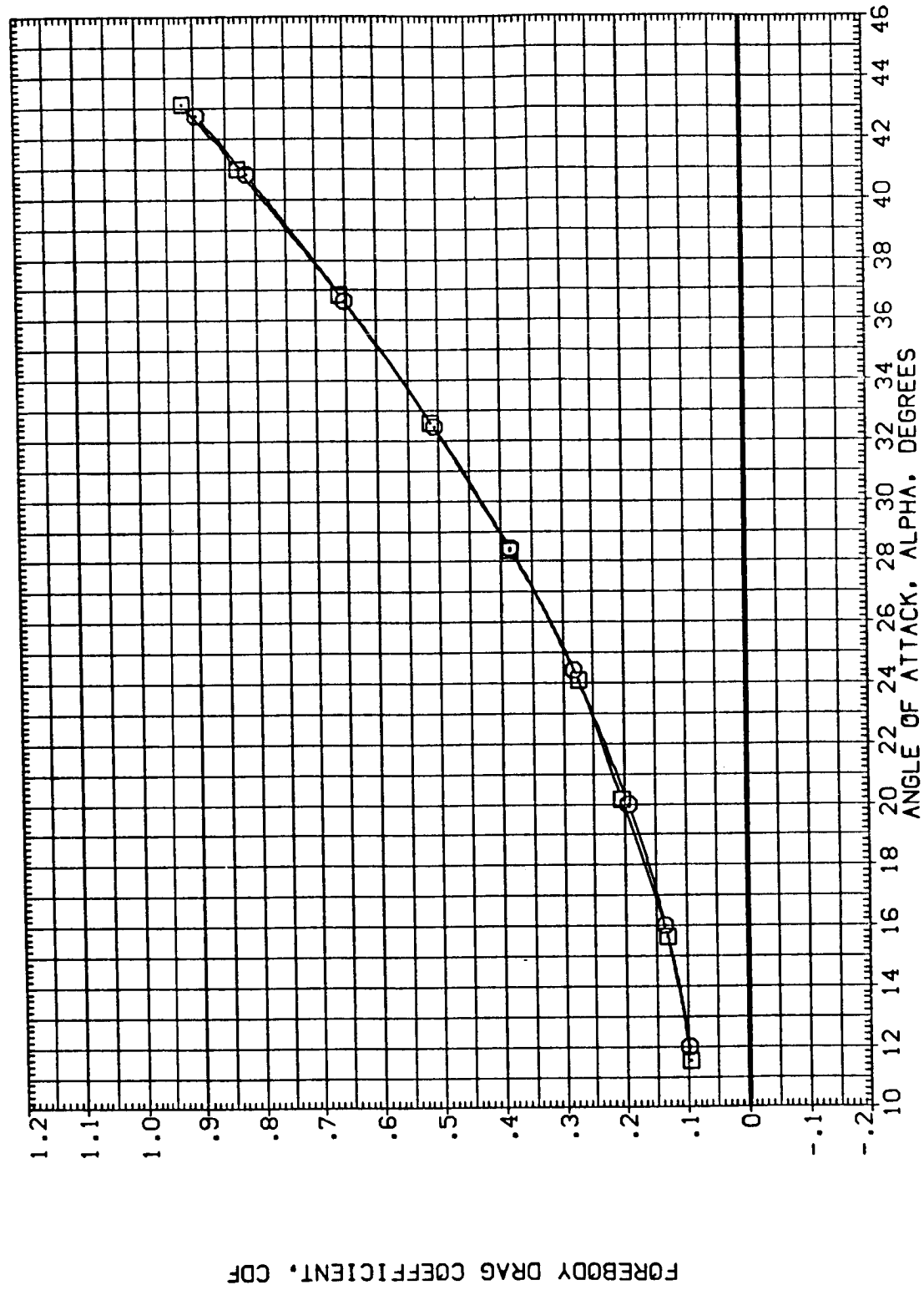


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEO015)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(KEO019)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

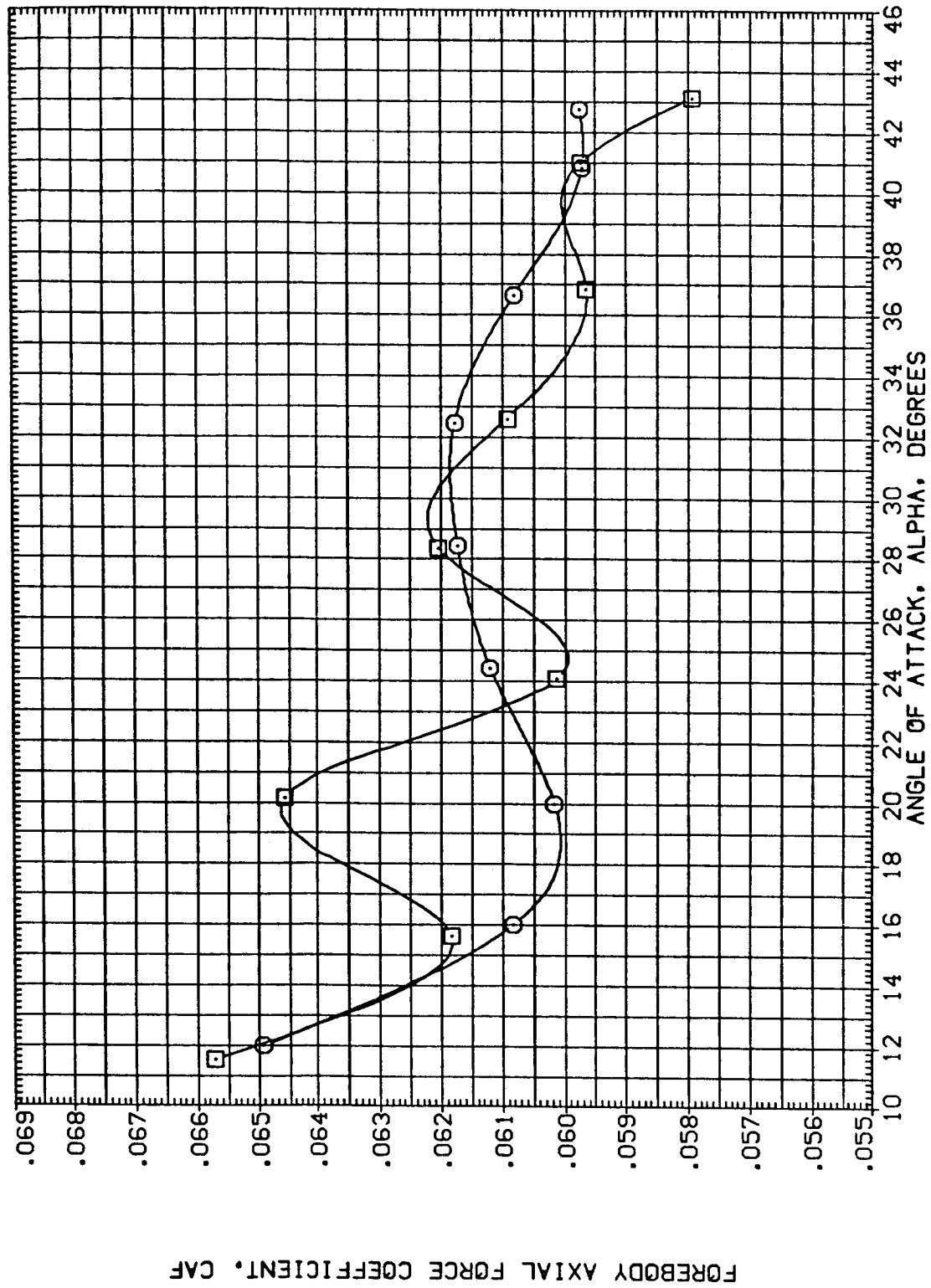


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A) MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0015)	AVES 3.5-190 QAS8 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(KE0019)	AVES 3.5-190 QAS8 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

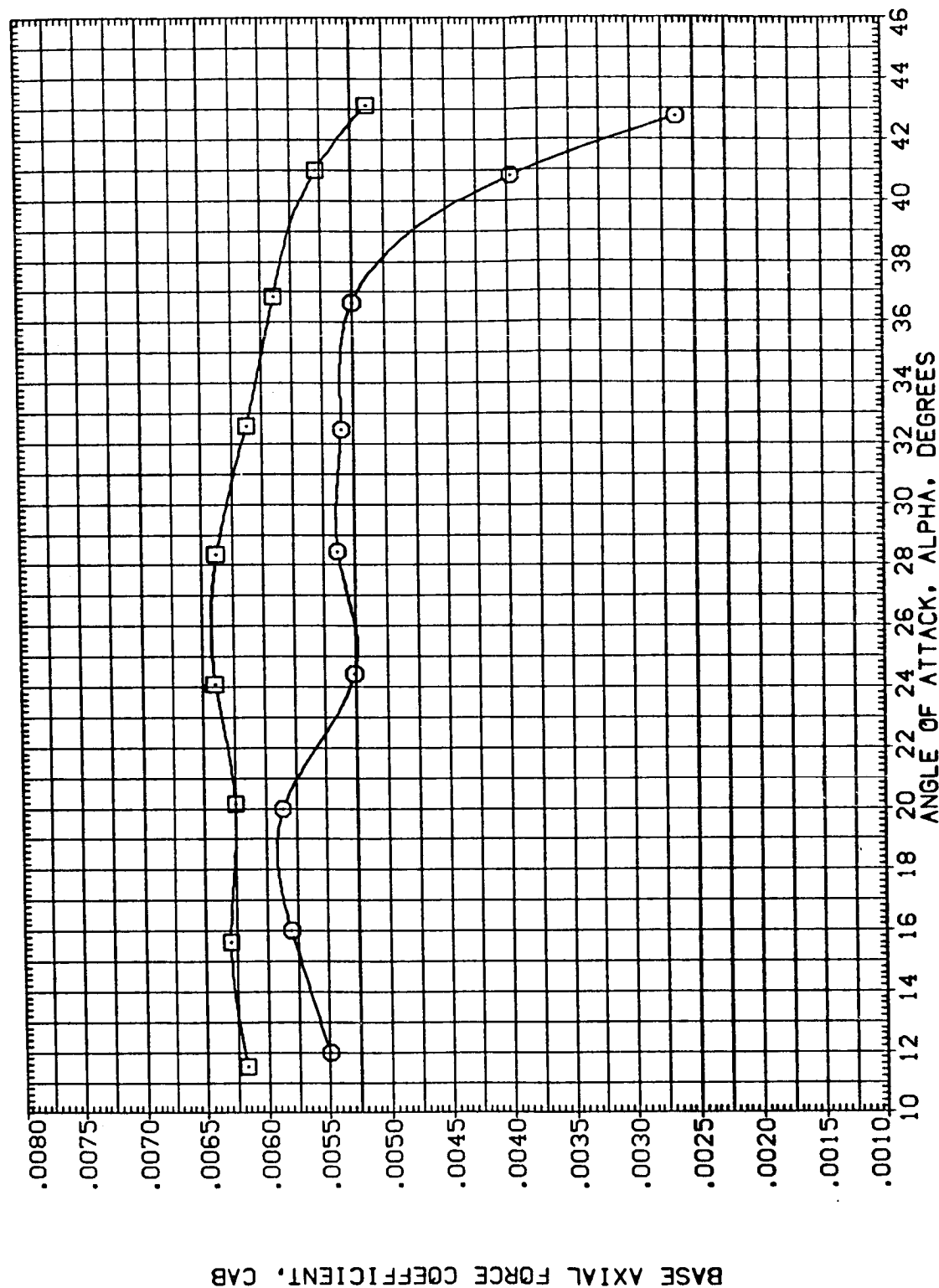


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(B0015)	8	AVES 3.5-190 DAS8 (011-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(T0019)		AVES 3.5-190 DAS8 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF	474.8000 IN.
							BREF	936.8800 IN.
							XMRP	1076.7000 IN.X0
							YMRP	.0000 IN.Y0
							ZMRP	375.0000 IN.Z0
							SCALE	.0150

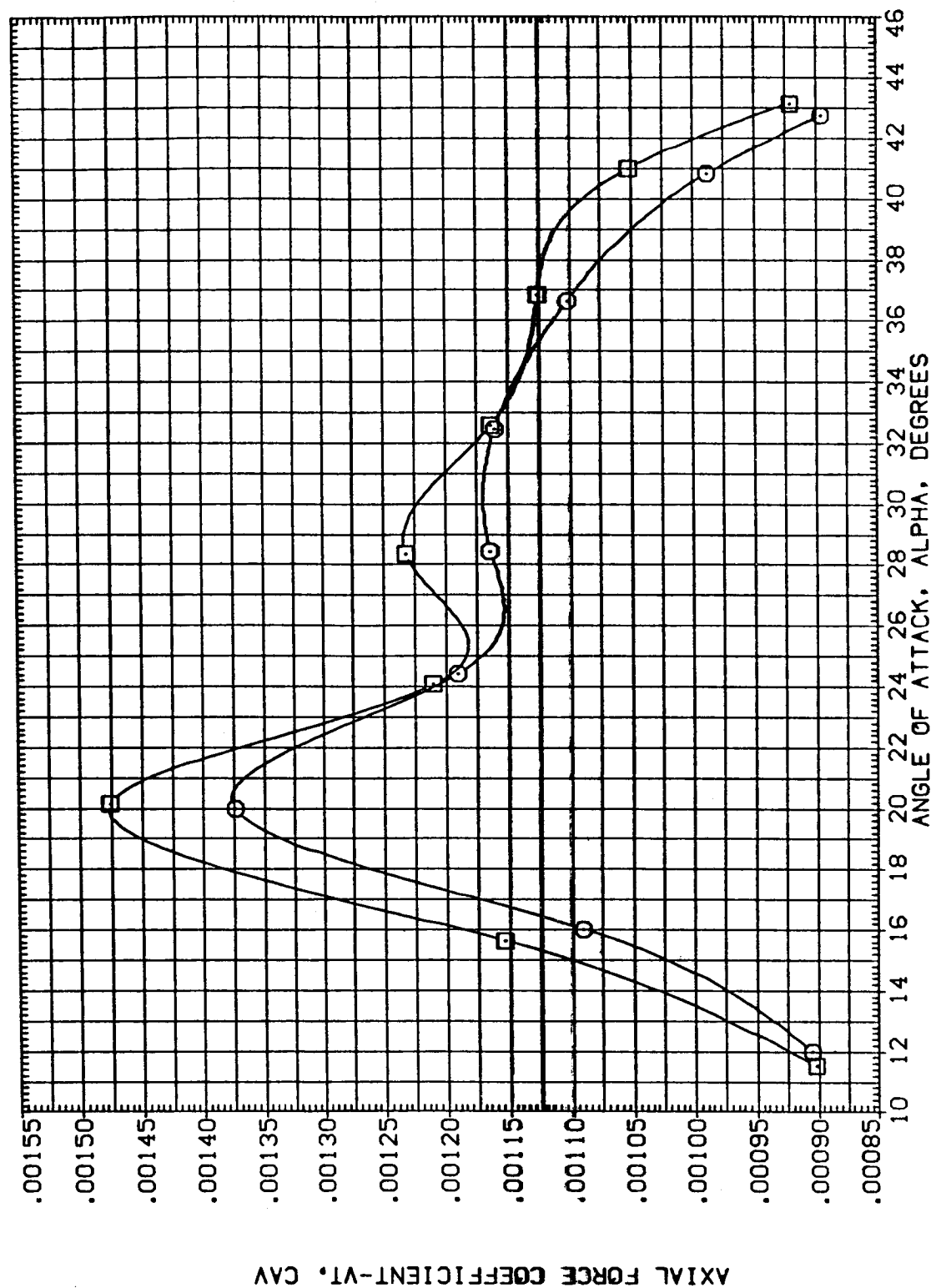


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BE0015) (1E0019)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-N7-M14-N24+DUMMY STING)

BETA .000 .000

ELEVON -40.000 -40.000

BOFLAP -11.700 -11.700

SPDRK 55.000 55.000

REFERENCE INFORMATION  
 SREF 2650.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

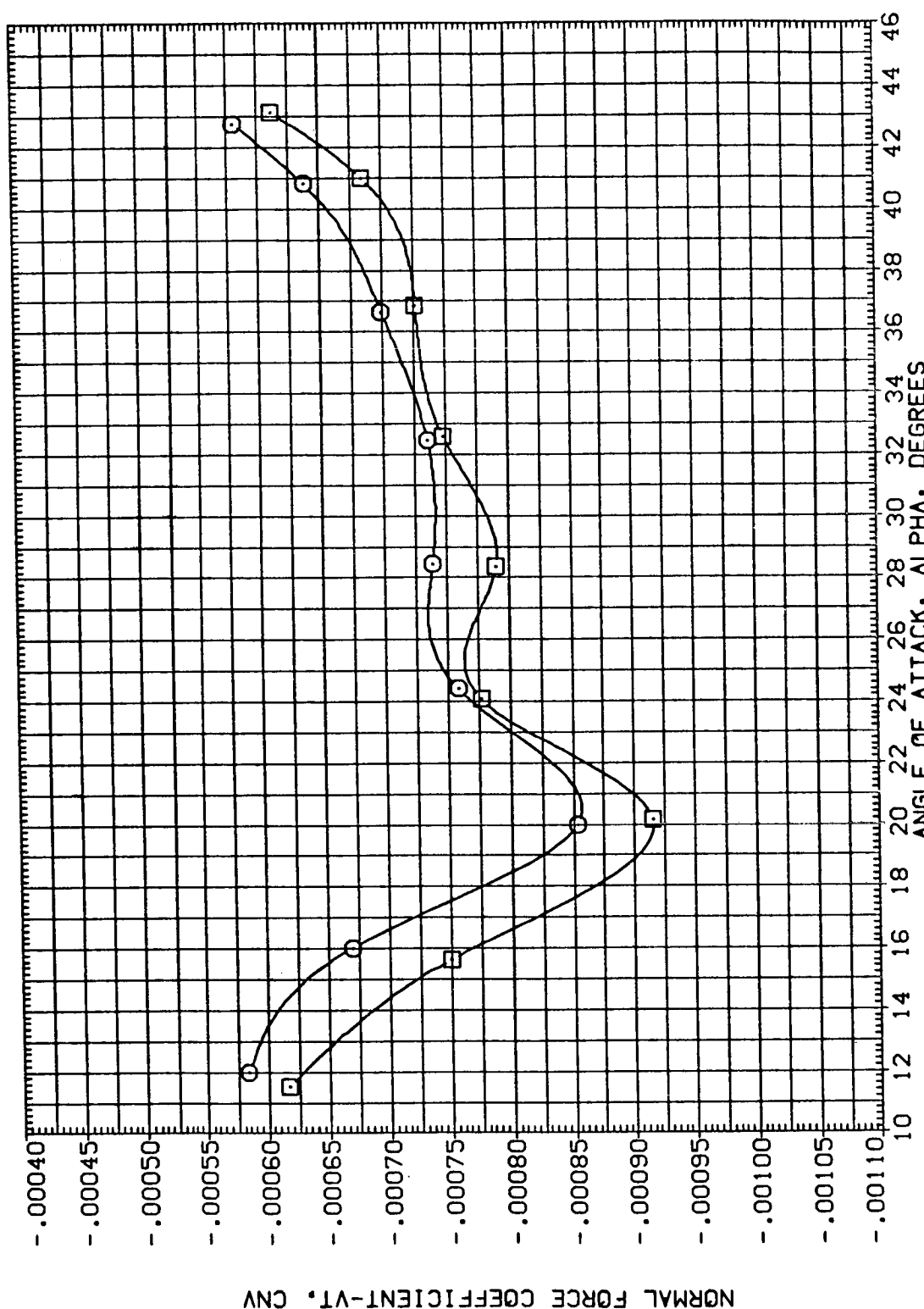


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BEG015) (LEG019)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)

BETA .000  
 ELEVON -40.000  
 BOFLAP -11.700  
 SPDBRK 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-VT, CMVFWD

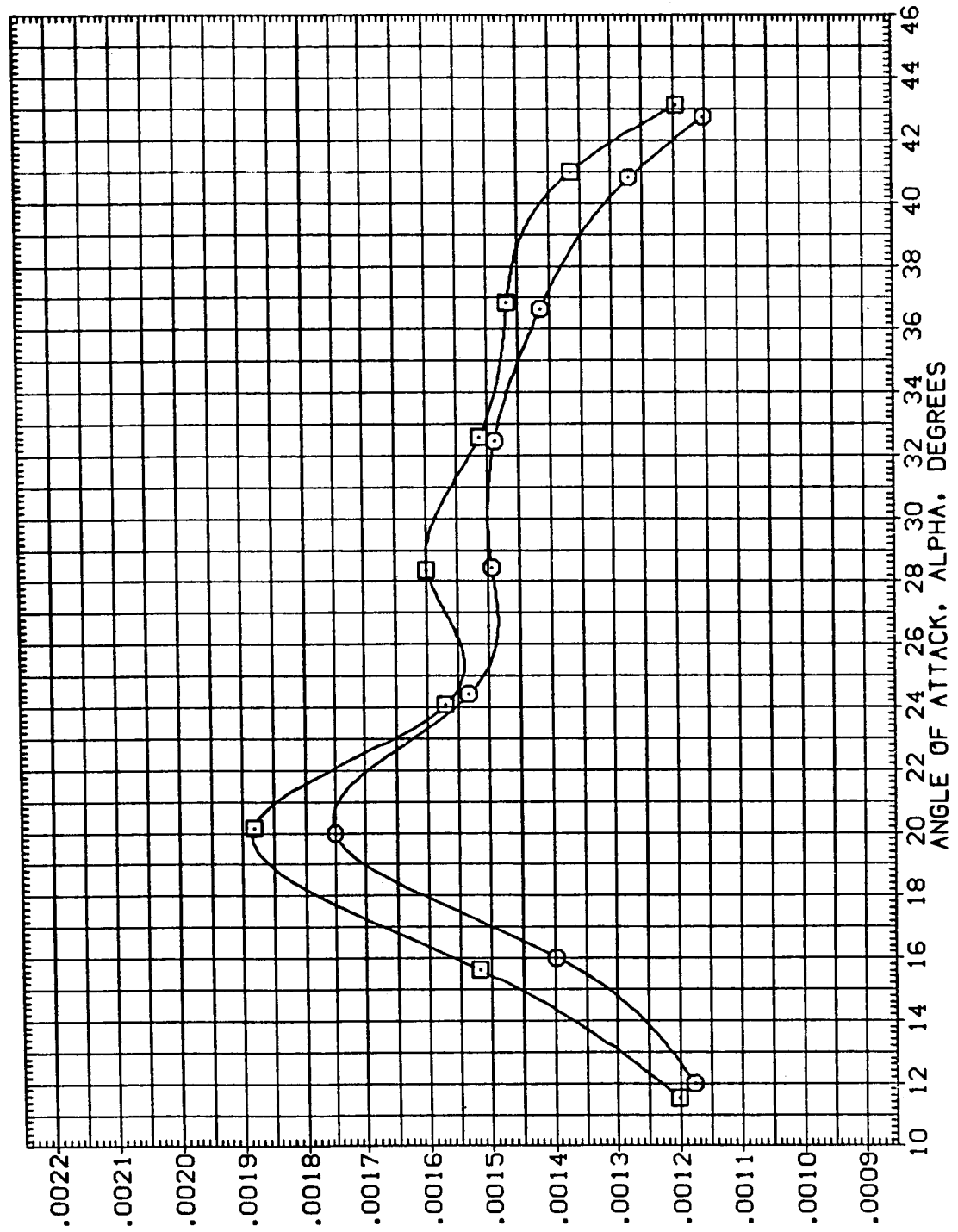


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (B00015) (1E0019)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)  
 AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)

BETA .000  
 ELEVON -40.000  
 BOFLAP -11.700  
 SPDBRK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

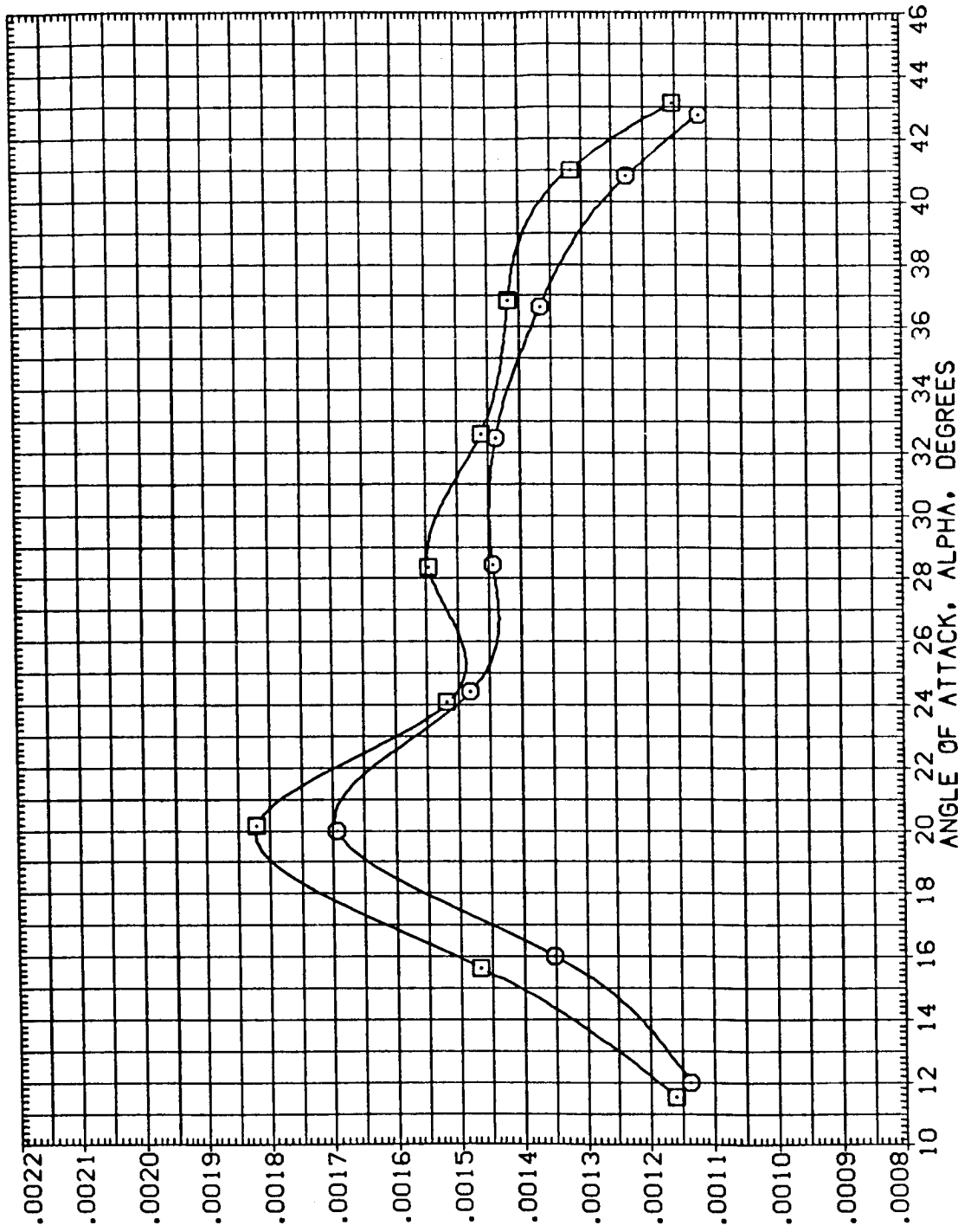


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0016)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(CE0020)	AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						YMRP 1076.7000 IN. X0
						ZMRP .0000 IN. Y0
						SCALE .0150

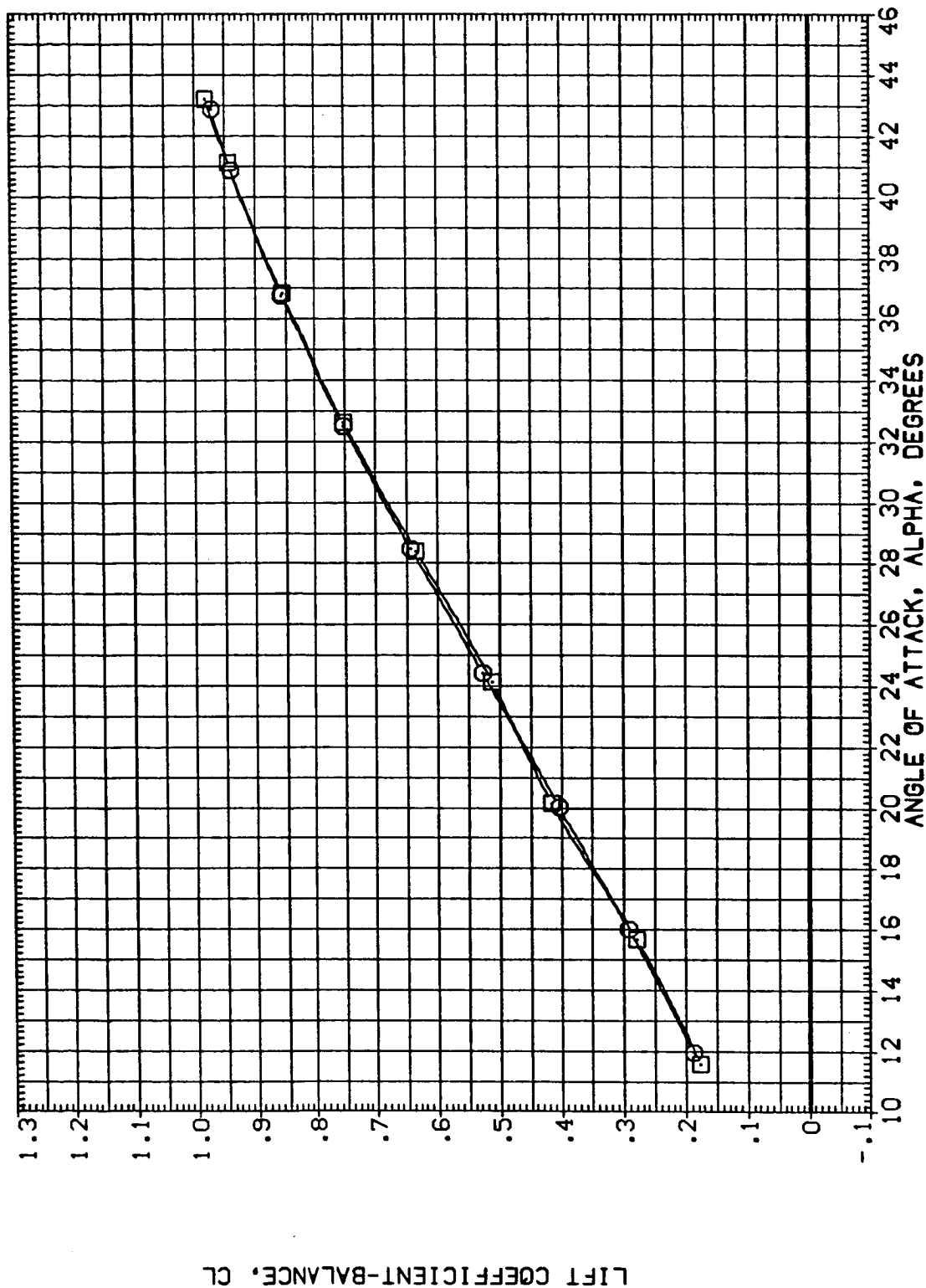


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (CE0016) (CE0020)

CONFIGURATION DESCRIPTION  
 APES 3.5-190 0A98 (011-N24+DUMMY STING)  
 APES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)

BETA .000 .000 .000

ELEVON .000 .000 .000

BOFLAP -11.700 -11.700

SPOBRK 85.000 85.000

REFERENCE INFORMATION  
 SREF 2650.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

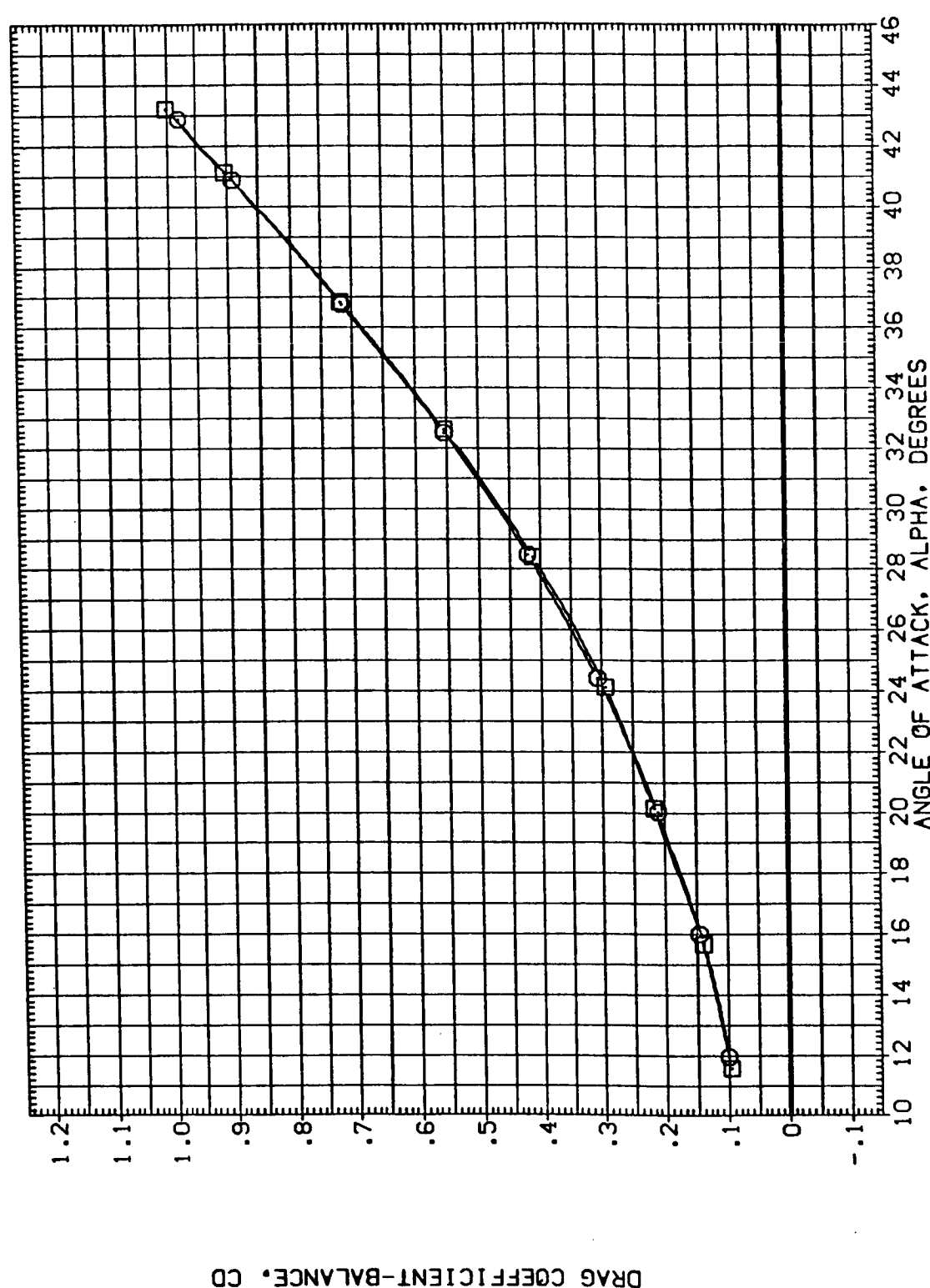


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0016)	AMES 3.5-190 DAY8 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 50.FT.
(CE0020)	AMES 3.5-190 DAY8 (011-N7+H14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

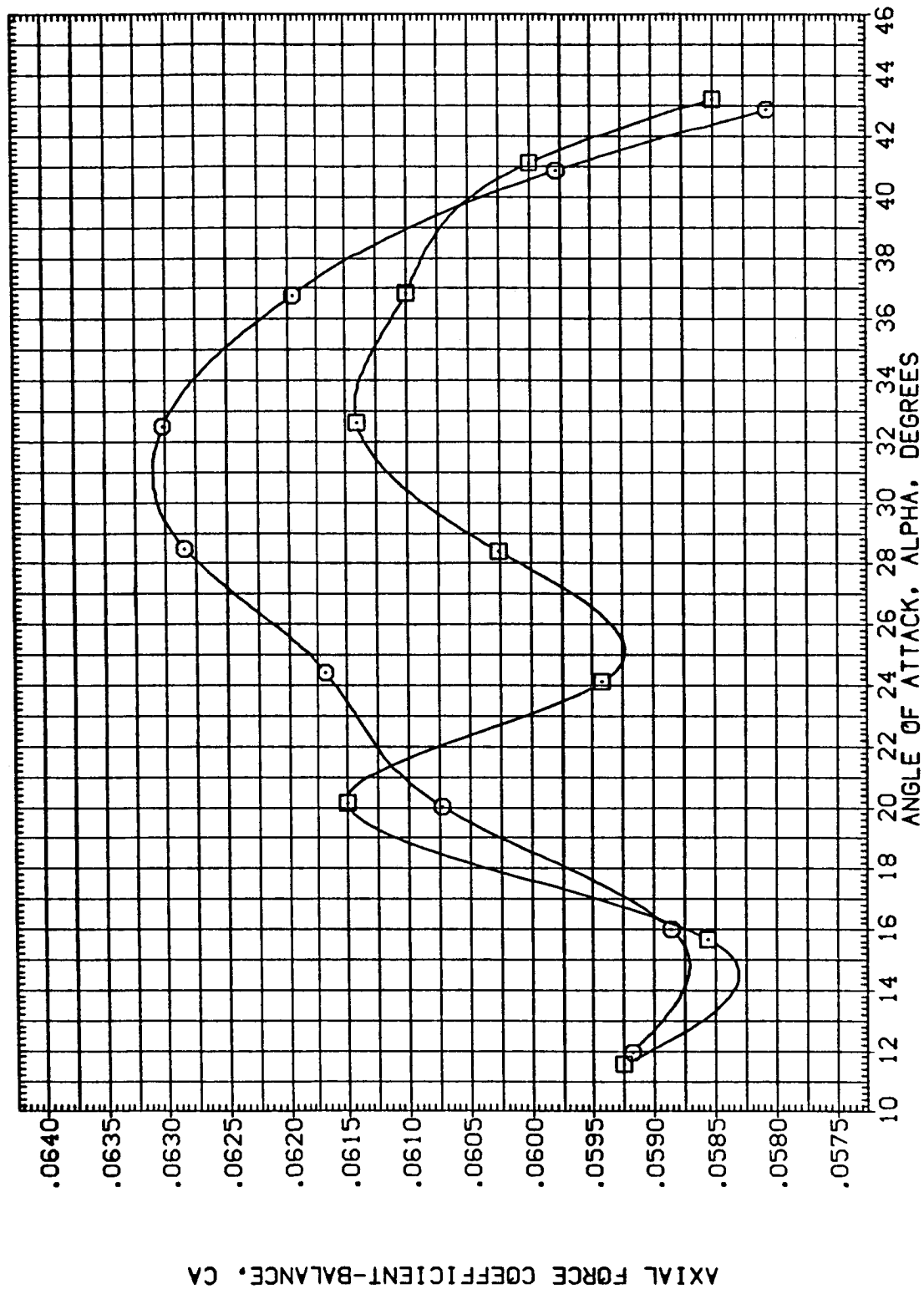


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CA/MACH = 5.25

DATA SET SYMBOL (CE0016) (CE0020) ☐ ☐

CONFIGURATION DESCRIPTION  
 ANES 3.5-190 0A98 (011-N24+DUMMY STING)  
 ANES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDRK 85.000 85.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

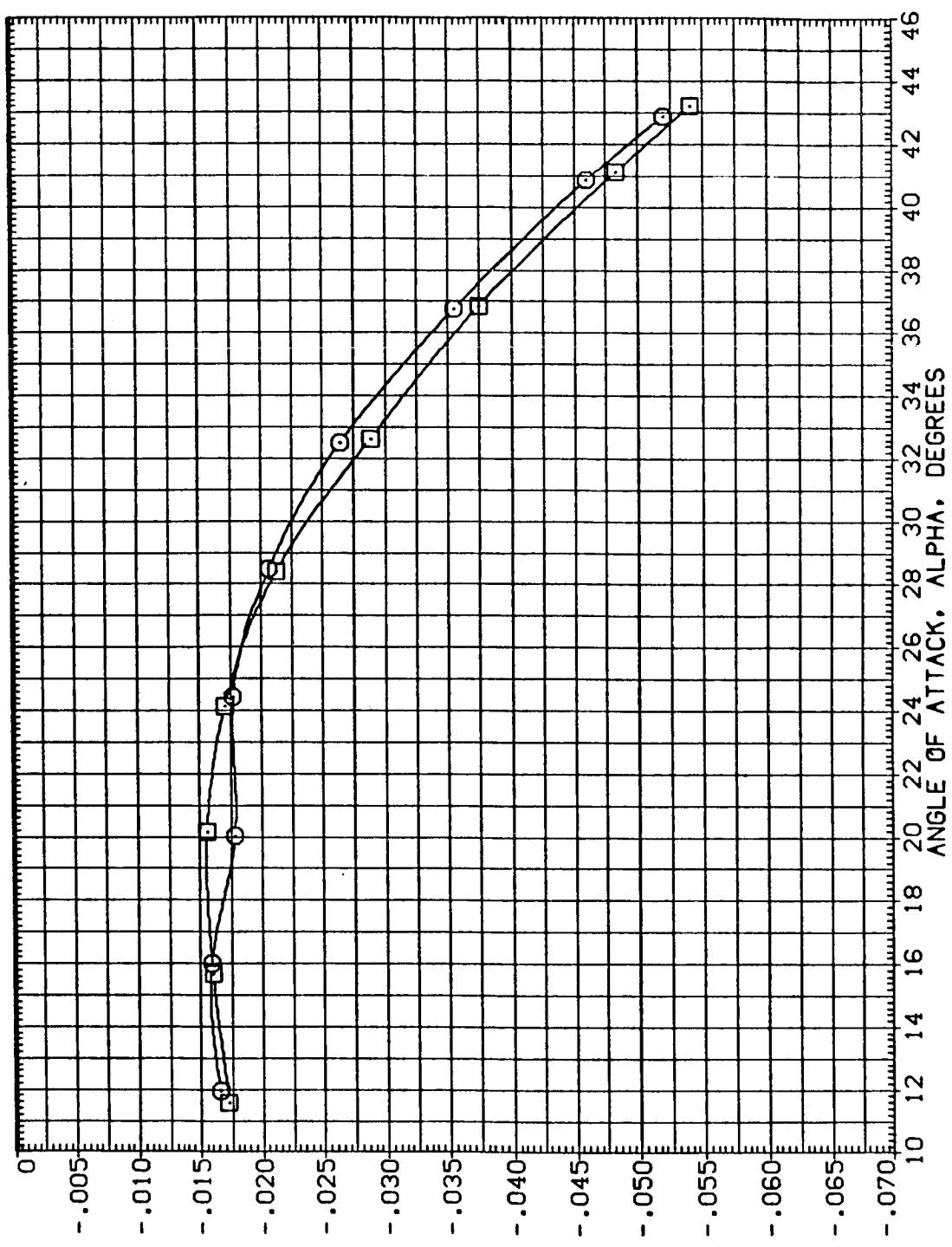


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

BETA	ELEVON	BDFLAP	SPDRBK	REFERENCE	INFORMATION
.000	.000	-11.700	85.000	SREF	2690.0000
.000	.000	-11.700	85.000	LREF	474.8000
				BREF	936.6800
				YMRP	1076.7000
				YMRP	.0000
				YMRP	.0000
				SCALE	.0150

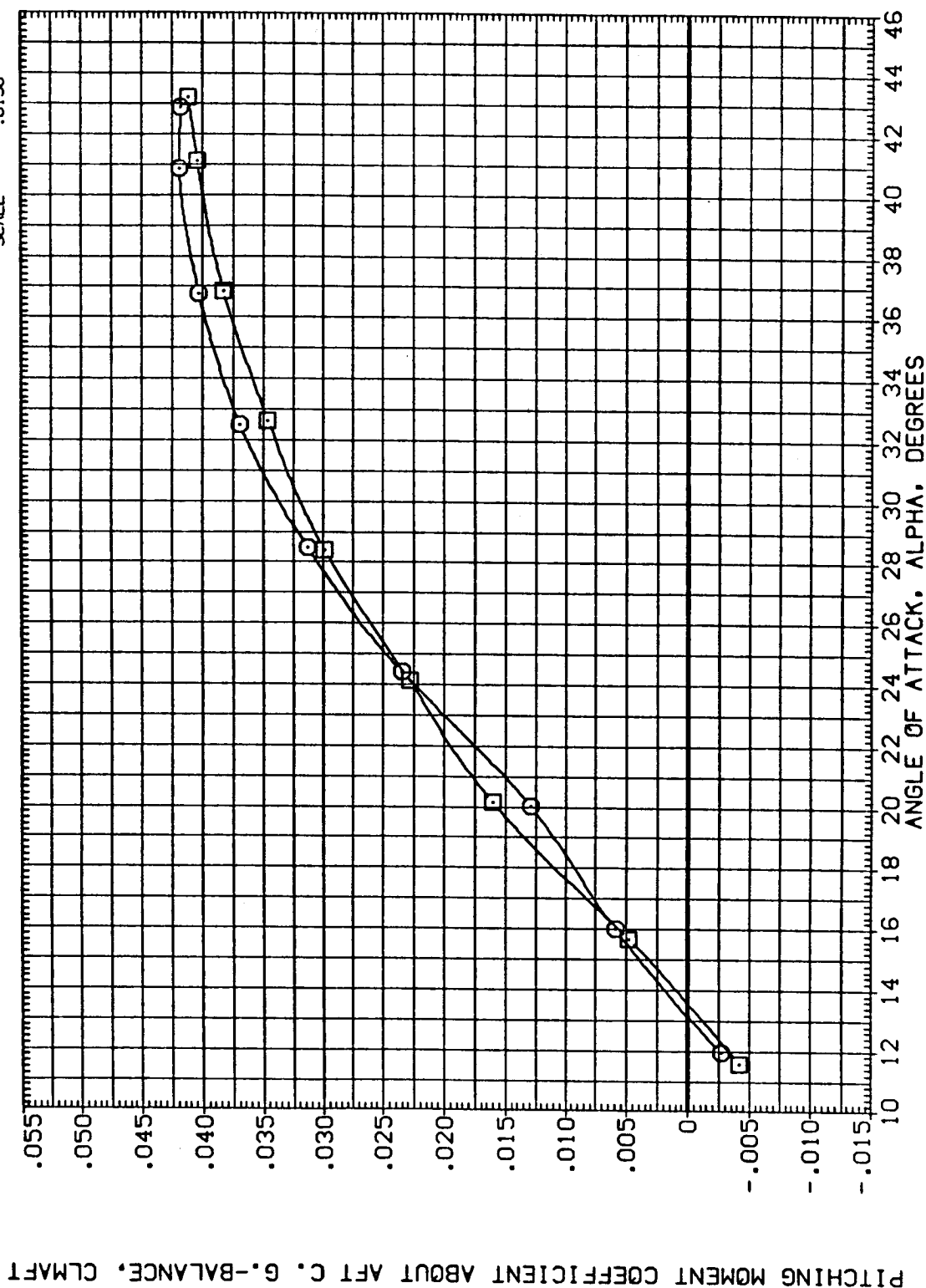


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

```
(A)MACH = 5.25
```

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0016)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2630.0000 50.FT.
(CE0020)	AMES 3.5-190 0A98 (011-N7+H14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE 375.0000 .0150

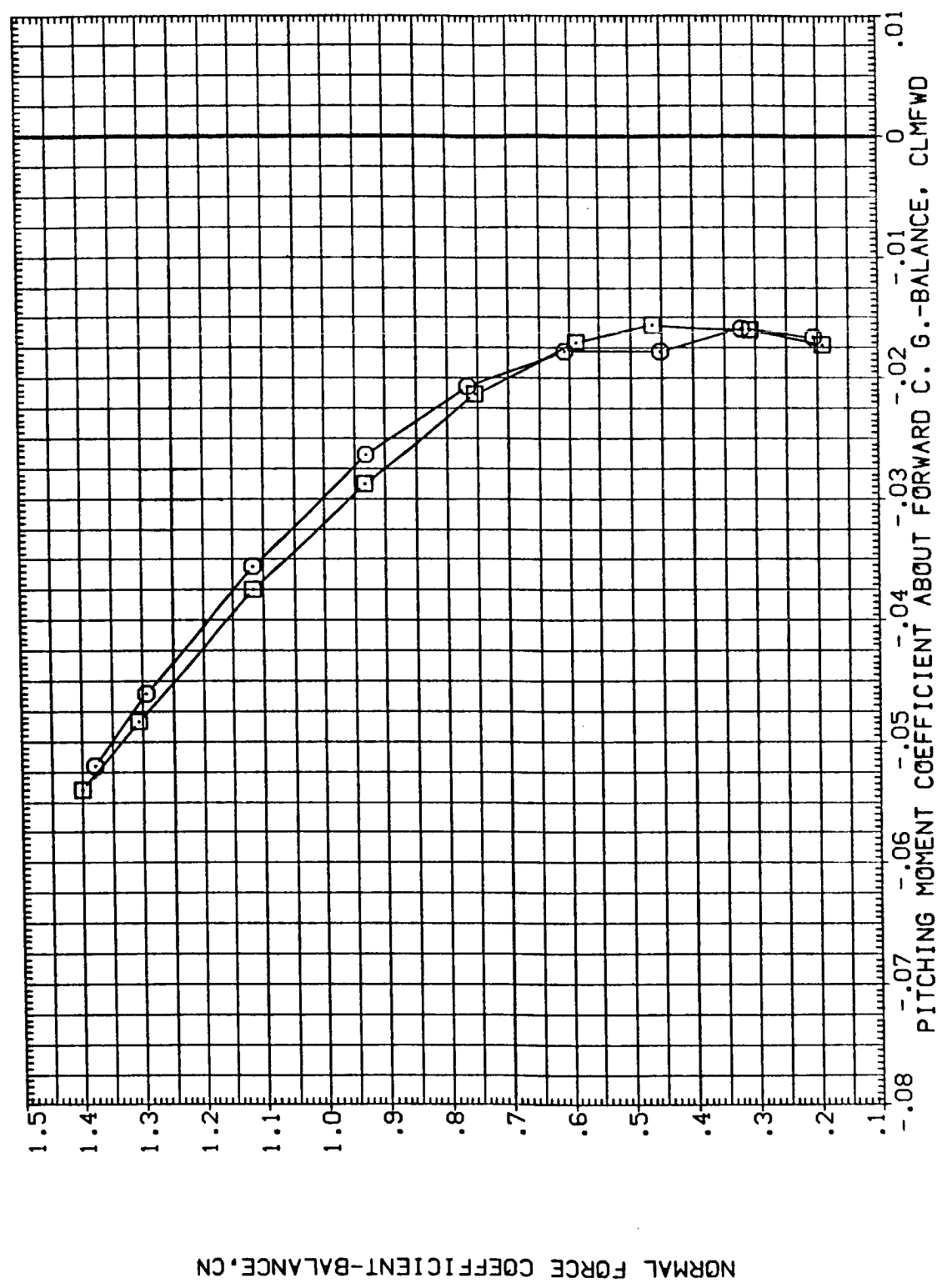


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0016)	AMES 3.5-190 OAS8 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(CE0020)	AMES 3.5-190 OAS8 (011-N7+H14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

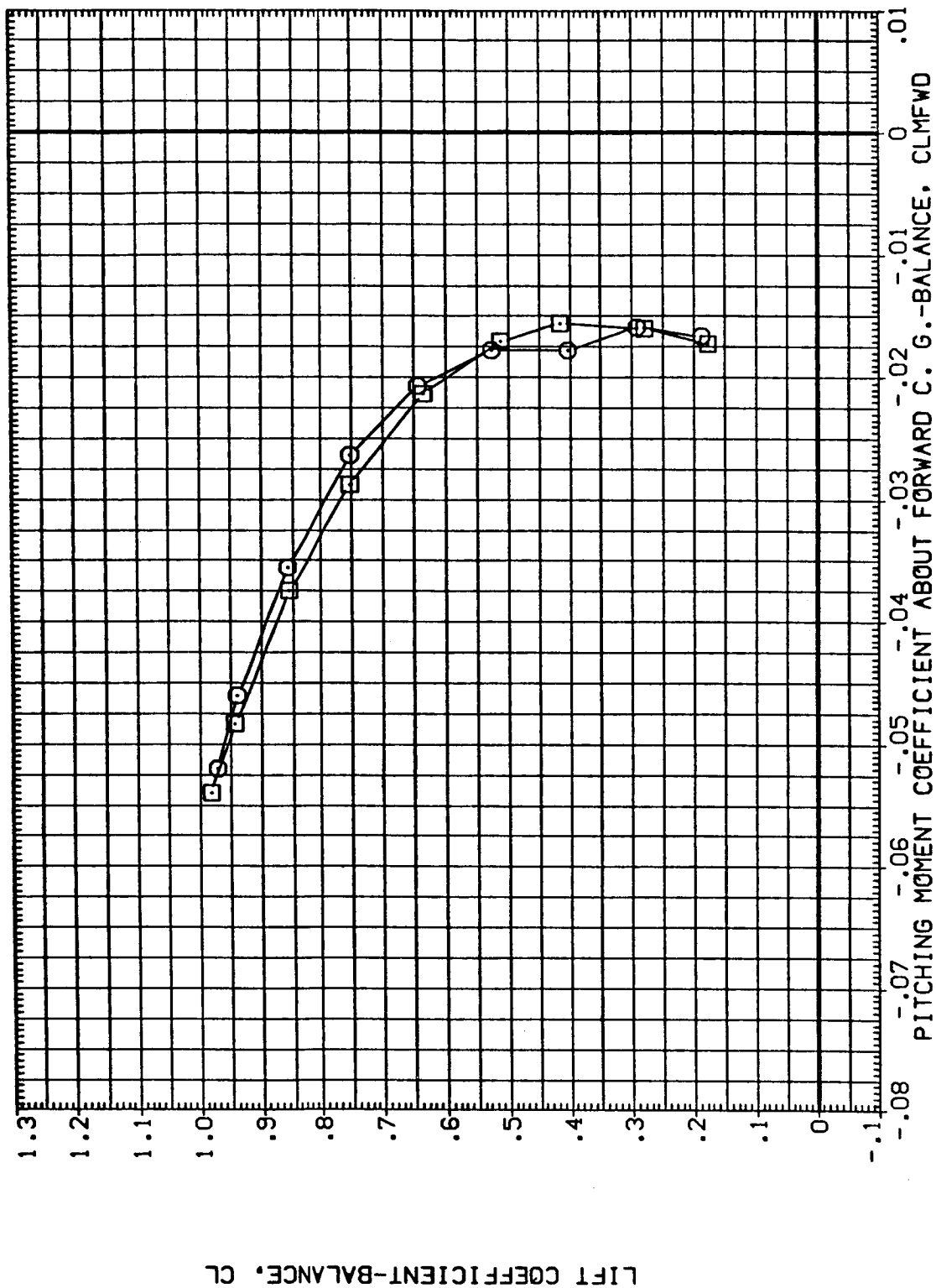


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

CAJ MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0016)	ANES 3.5-190 OAS8 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(CE0020)	ANES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

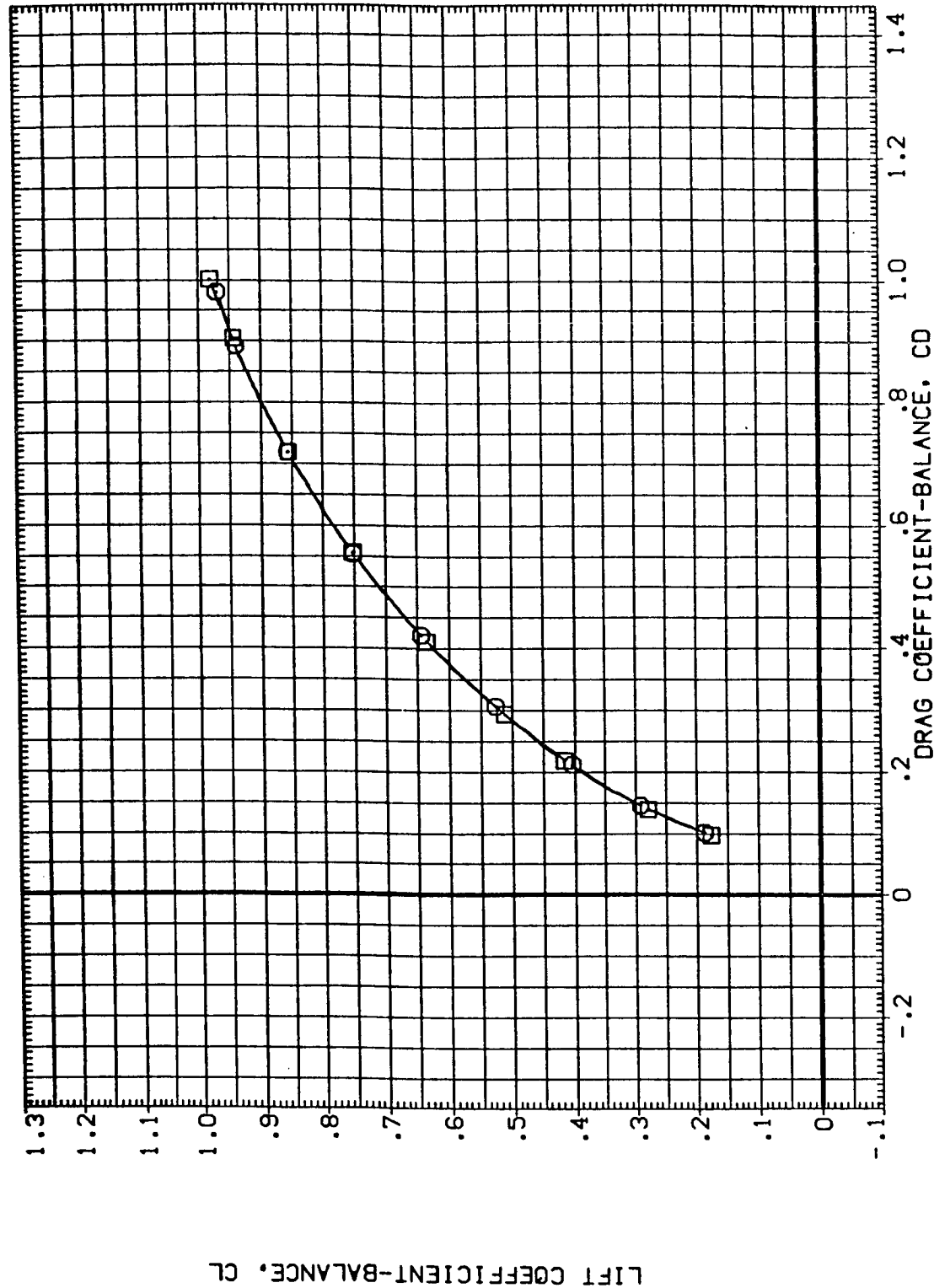


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25



DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (EEO016)    AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 (EEO020)    AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA    ELEVON    BOFLAP    SPOBRK  
 .000    .000    -11.700    85.000  
 .000    .000    -11.700    85.000

REFERENCE INFORMATION  
 SREF    2690.0000    SQ.FT.  
 LREF    474.8000    IN.  
 BREF    936.6800    IN.  
 XPRP    1076.7000    IN.X0  
 YMRP    .0000    IN.Y0  
 ZMRP    375.0000    IN.Z0  
 SCALE    .0150

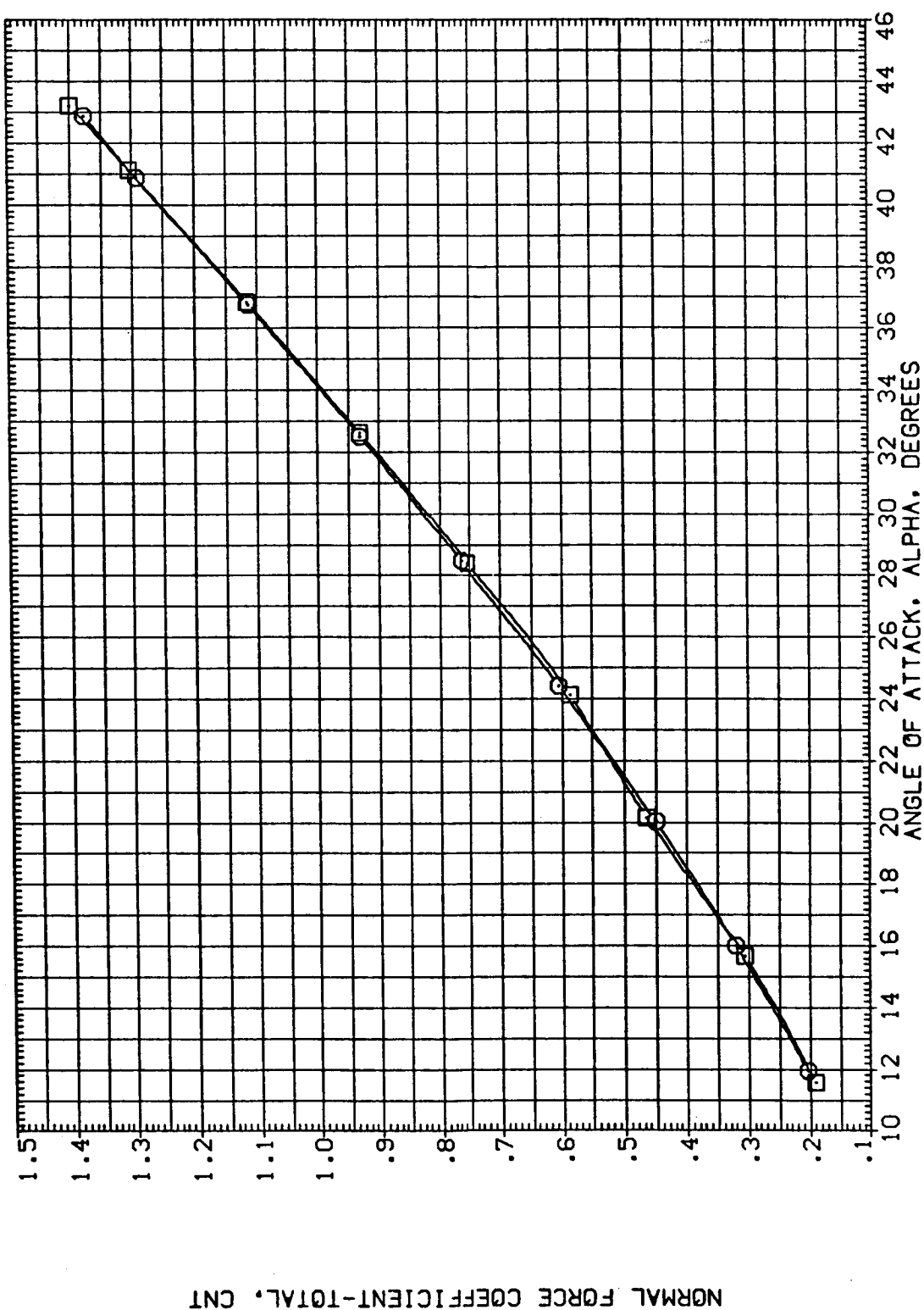


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0016)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(EE0020)	AMES 3.5-190 OA98 (011-H7+H14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

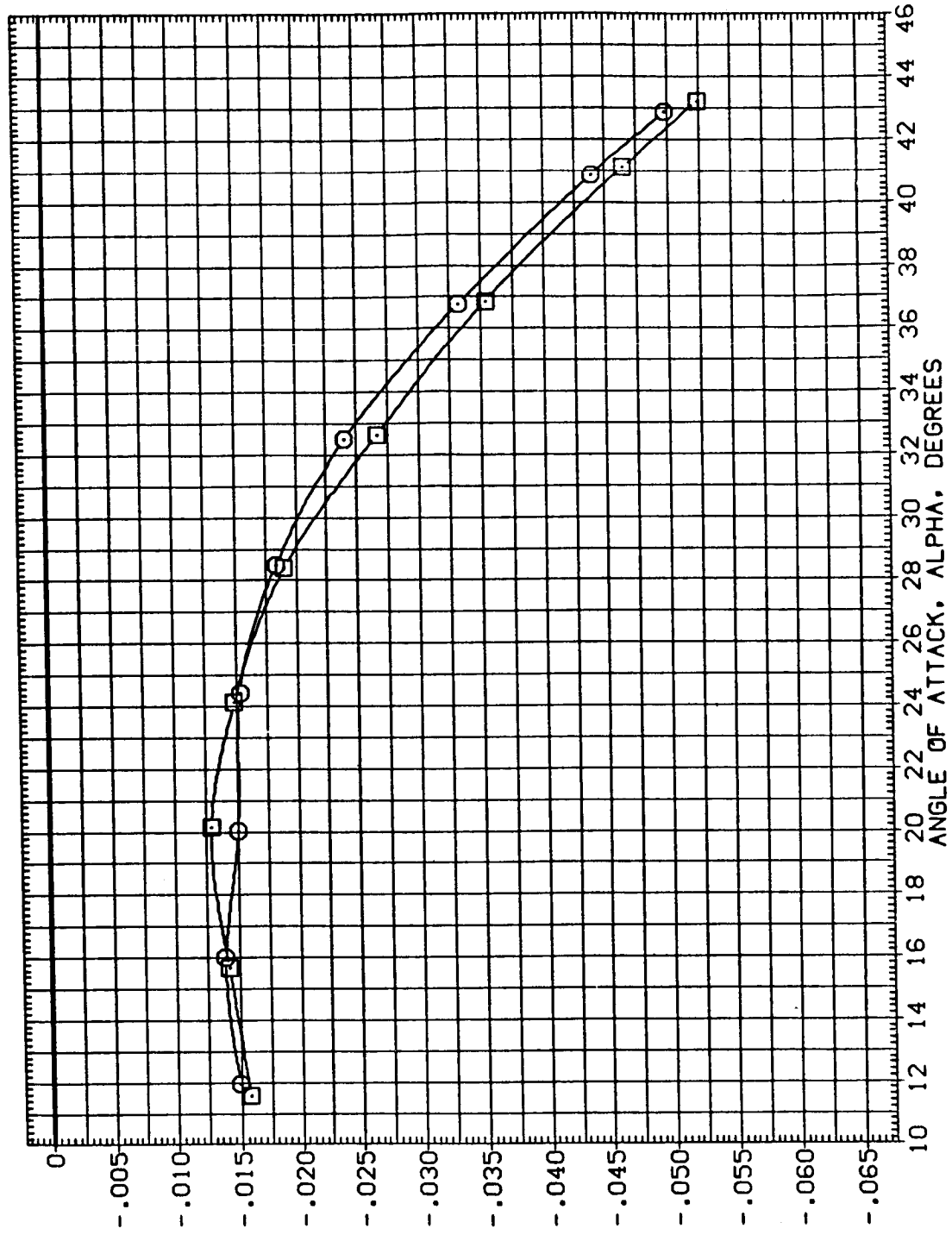


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION	DESCRIPTION
(EEG016)	AVES 3.5-190 0A98	(011-N24+DUMMY STING)
(EEG020)	AVES 3.5-190 0A98	(011-P7+H14-N24+DUMMY STING)

BETA	ELEVON	BDFLAP	SPOBRK
.000	.000	-11.700	85.000
.000	.000	-11.700	85.000

REFERENCE INFORMATION	
	SQ. FT.
SREF	2650.000
LREF	474.8000
BREF	936.6800
XMRP	1075.7000
YMRP	.0000
ZMRP	375.0000
SCALE	.0150



FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

DATA SET SYMBOL  
(EE0016)  
(EE0020)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 OA98 (011-N24+DUMMY STING)  
AMES 3.5-190 OA98 (011-H7+H14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPOBRK  
85.000  
85.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

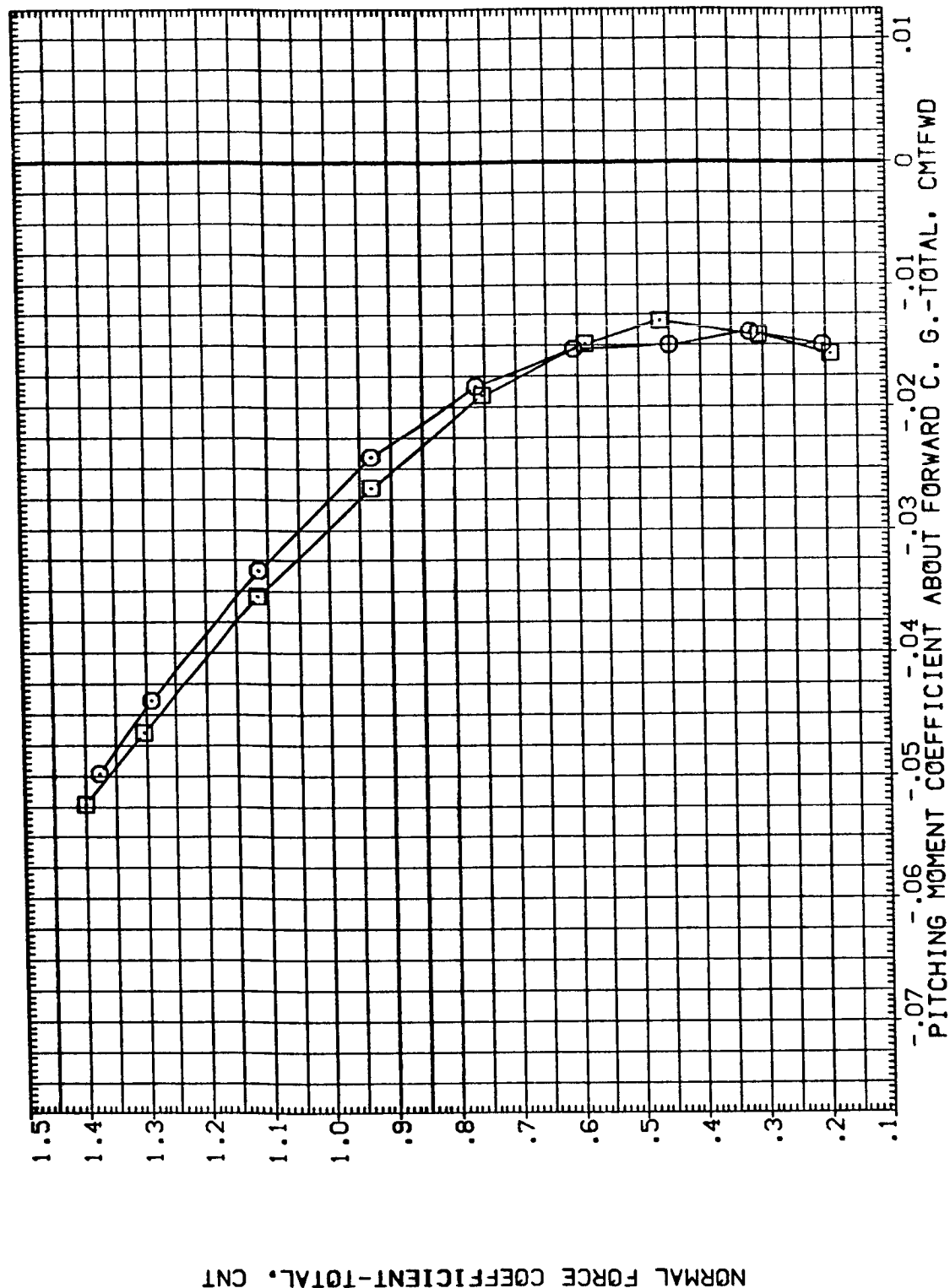


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BD FLAP	SPOBRK	REFERENCE INFORMATION
(EE0016)	AMES 3.5-190 OASB (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(EE0020)	AMES 3.5-190 OASB (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

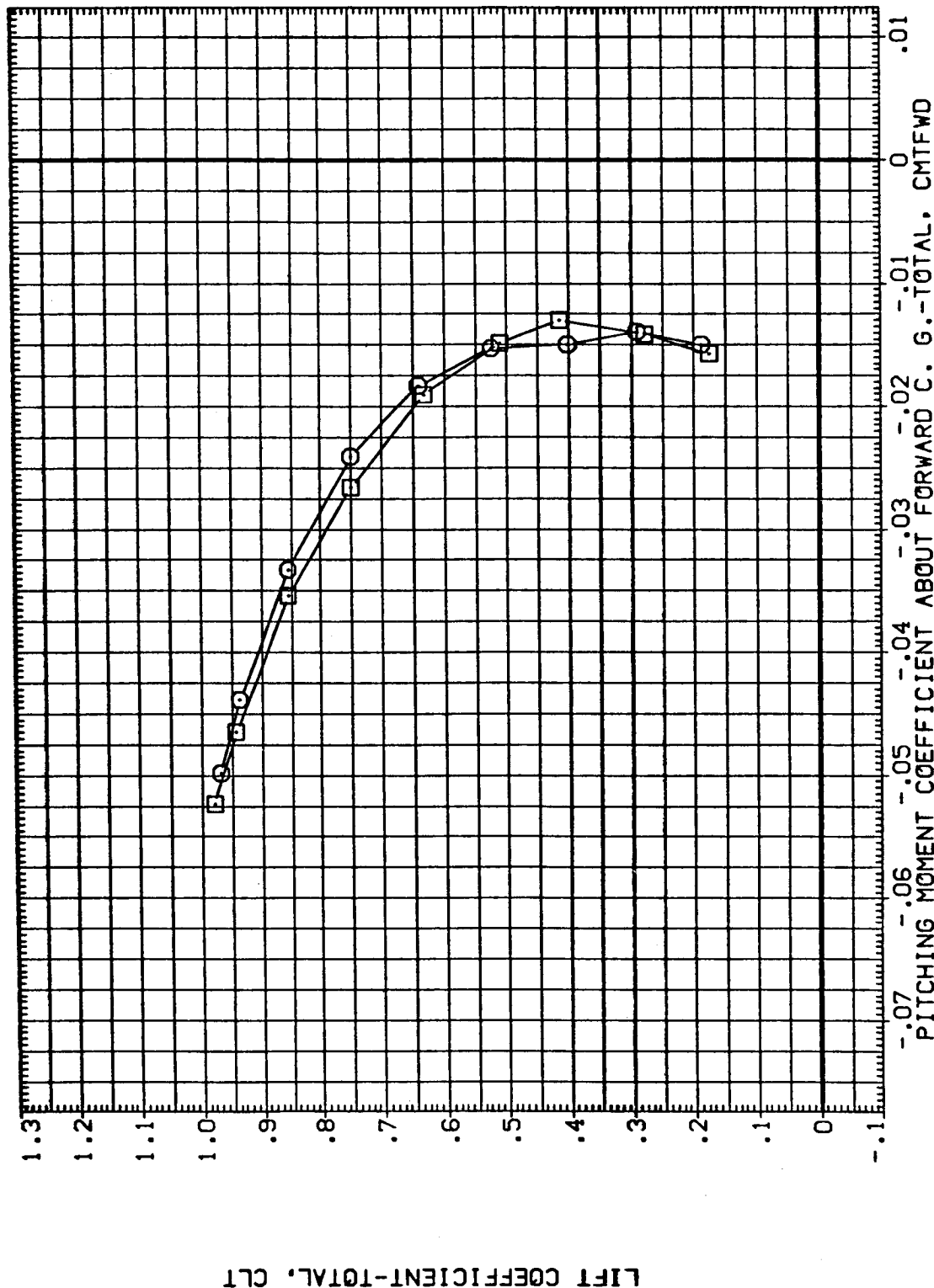


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0016)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(EE0020)	AMES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

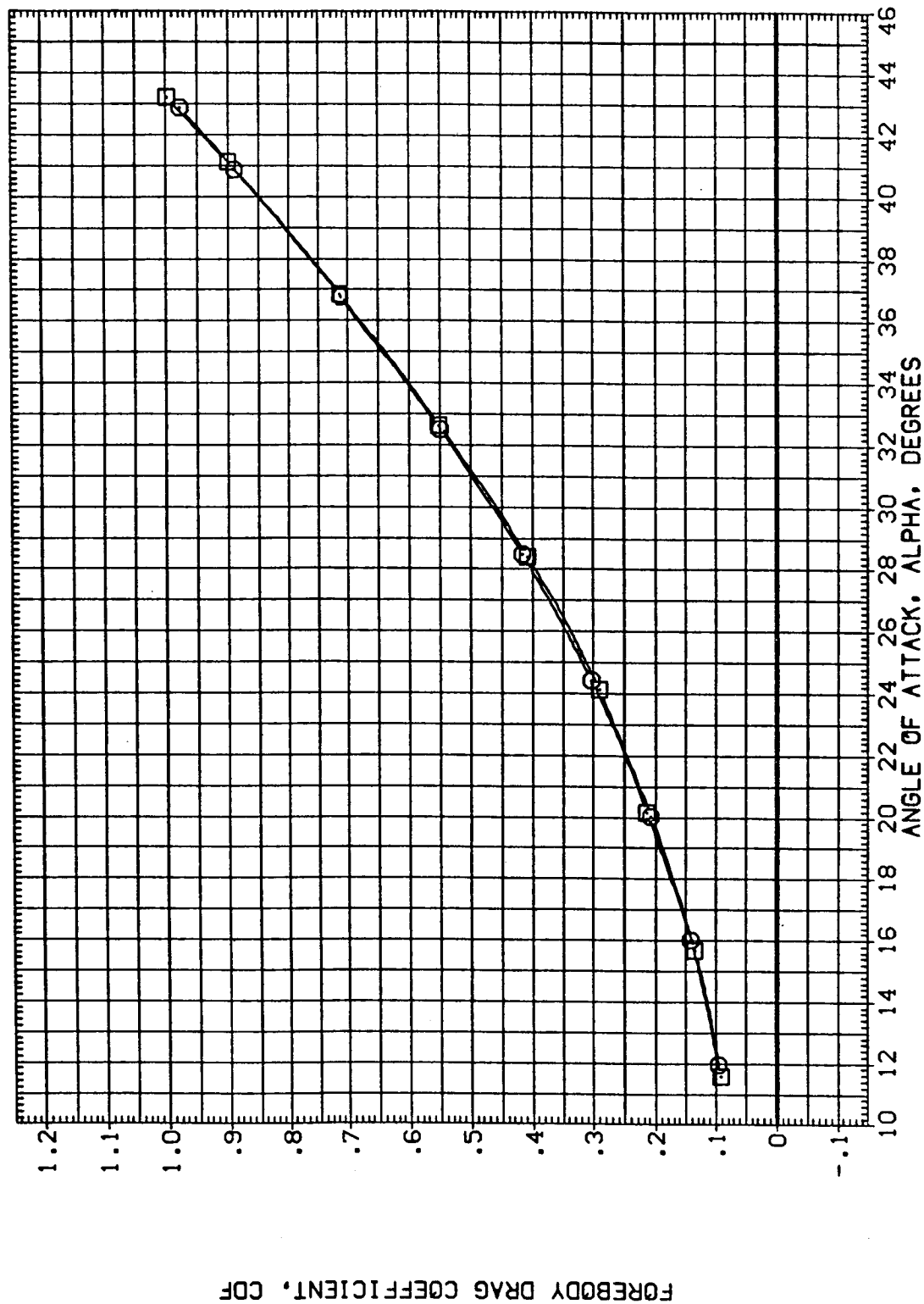


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (EE0016) (EE0020)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 OA98 (011-N24+DUMMY STING)  
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDRK 85.000 85.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 YMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

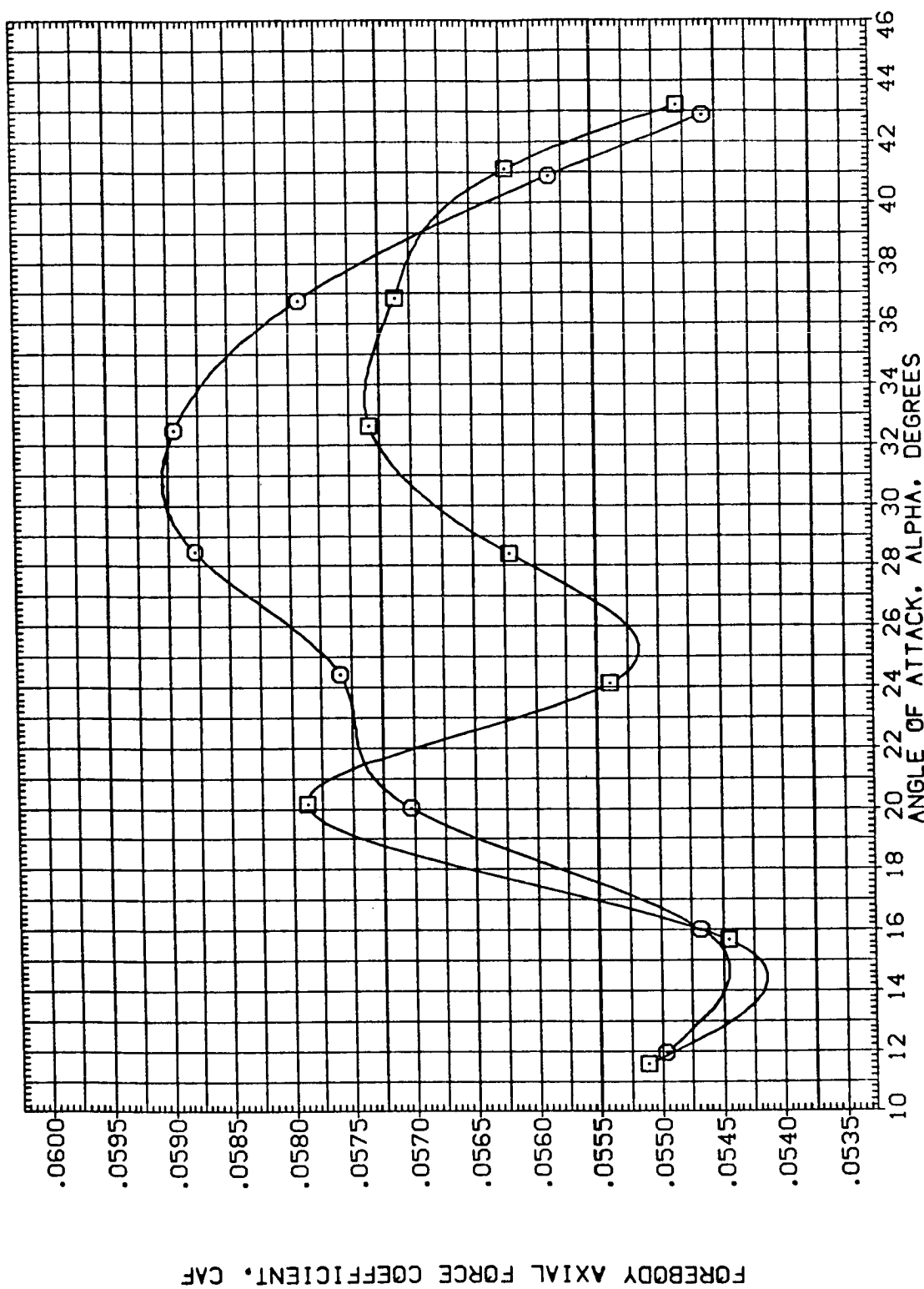


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0016)	AVES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(EE0020)	AVES 3.5-190 0A98 (011-N7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

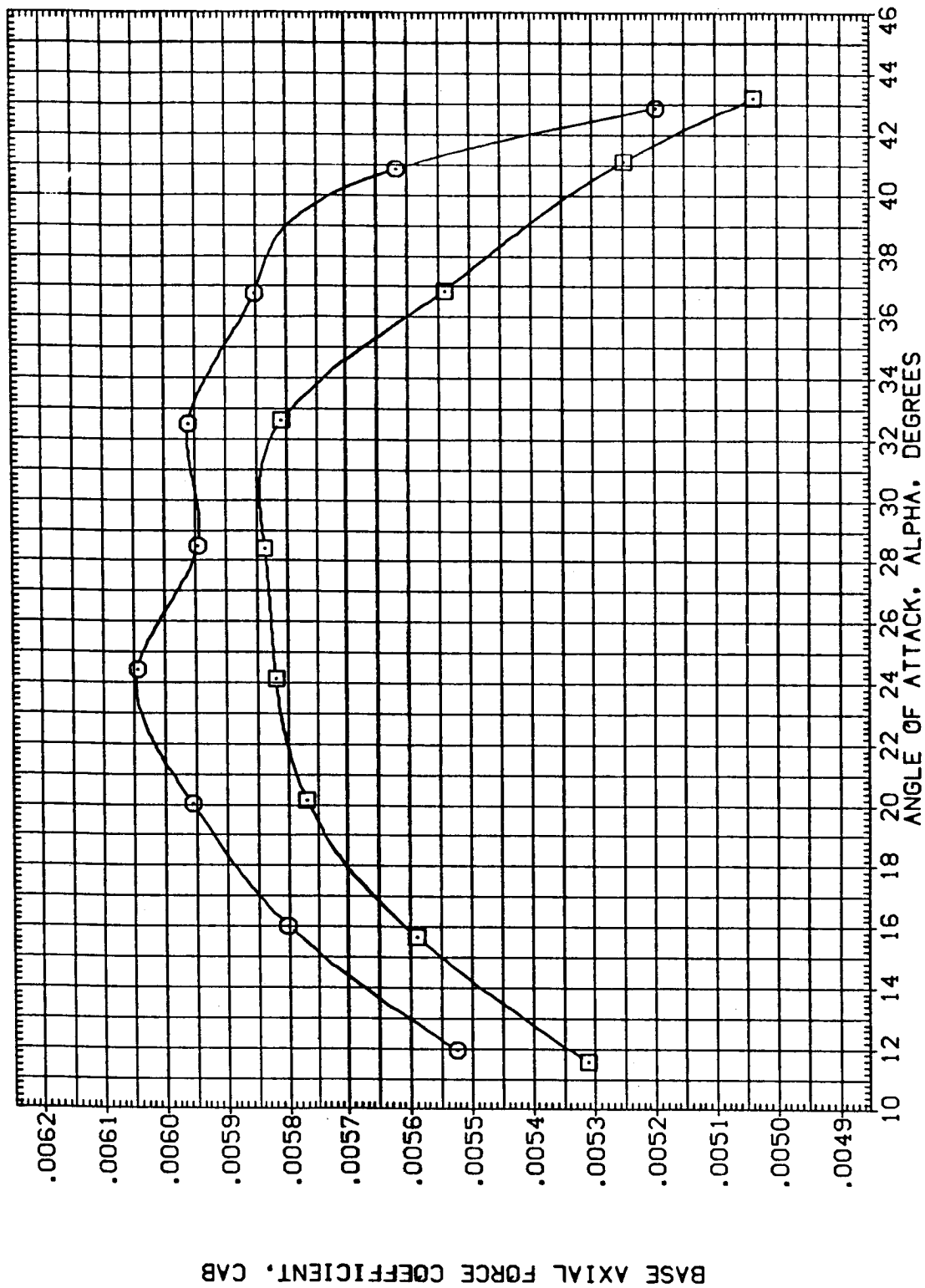


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPODBRK	REFERENCE INFORMATION
(BE0016)	AMES 3.5-190 OA98 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SO.FT.
(BE0020)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

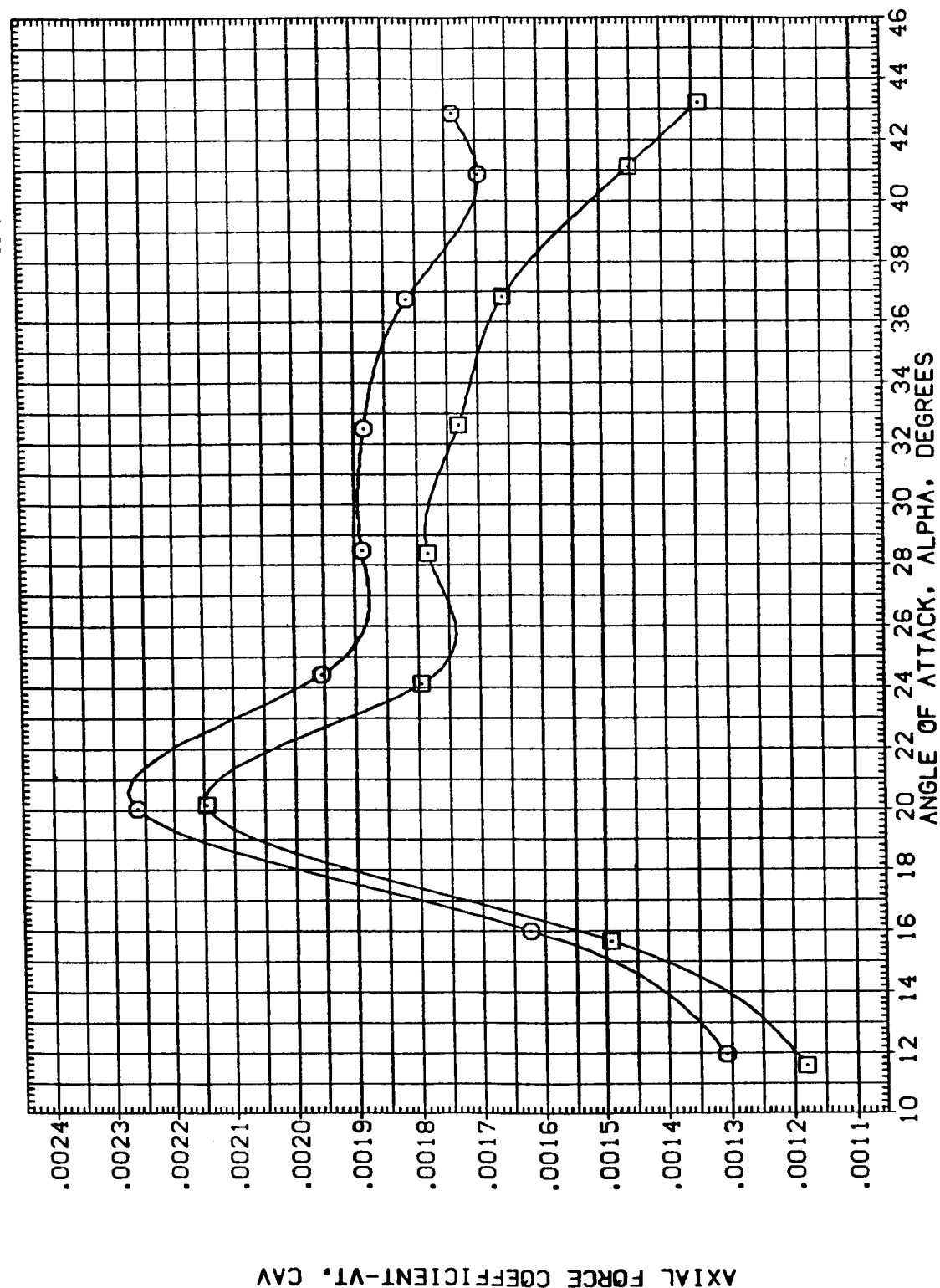


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(BEG016)	AMES 3.5-190 OAS8 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(BEG020)	AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

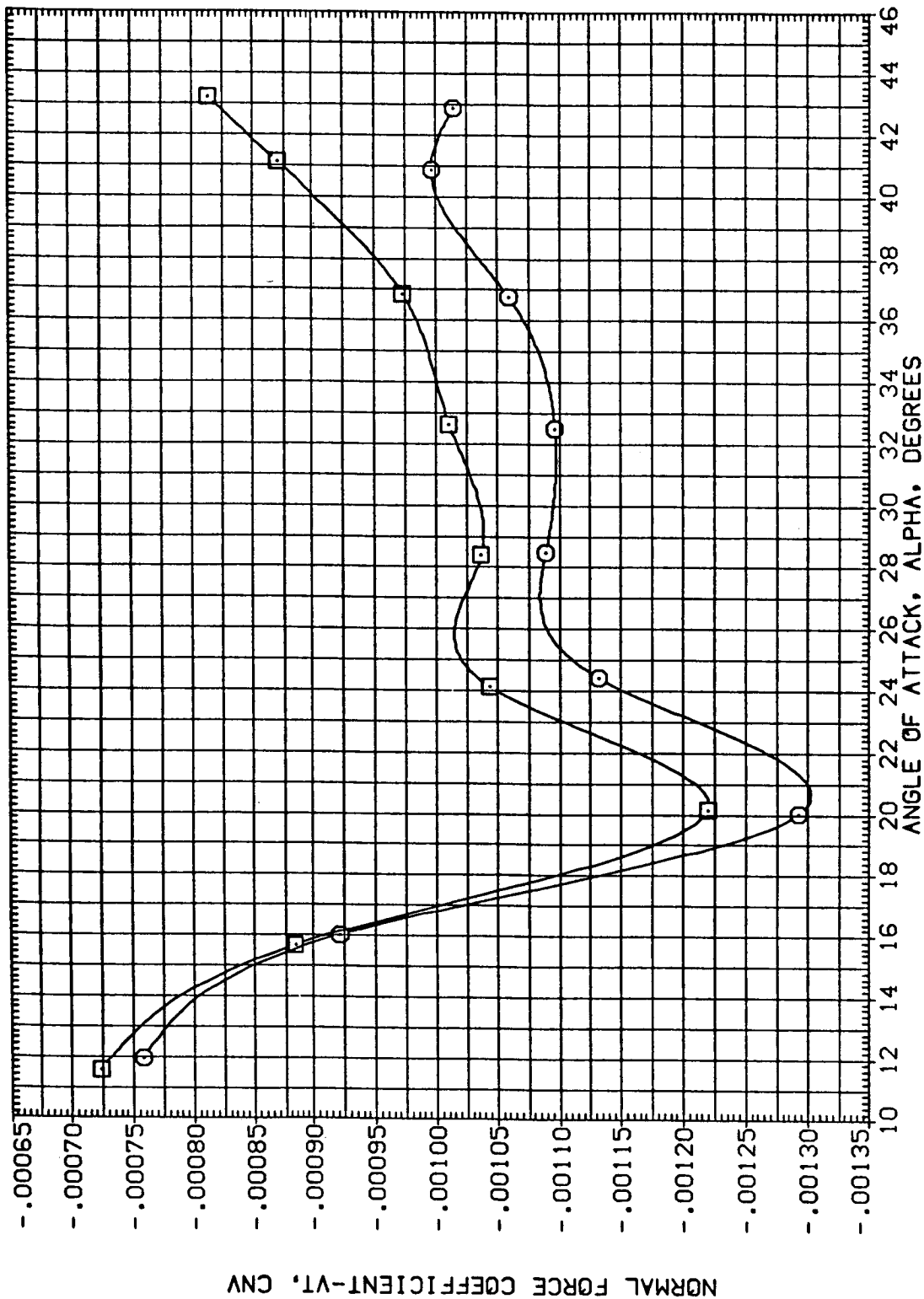


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL (BEG0016)  
 (BEG0020)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-N7+H14-N24+DUMMY STING)

BETA .000  
 .000

ELEVON .000  
 .000

BOFLAP -11.700  
 -11.700

SPDBRK 85.000  
 85.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

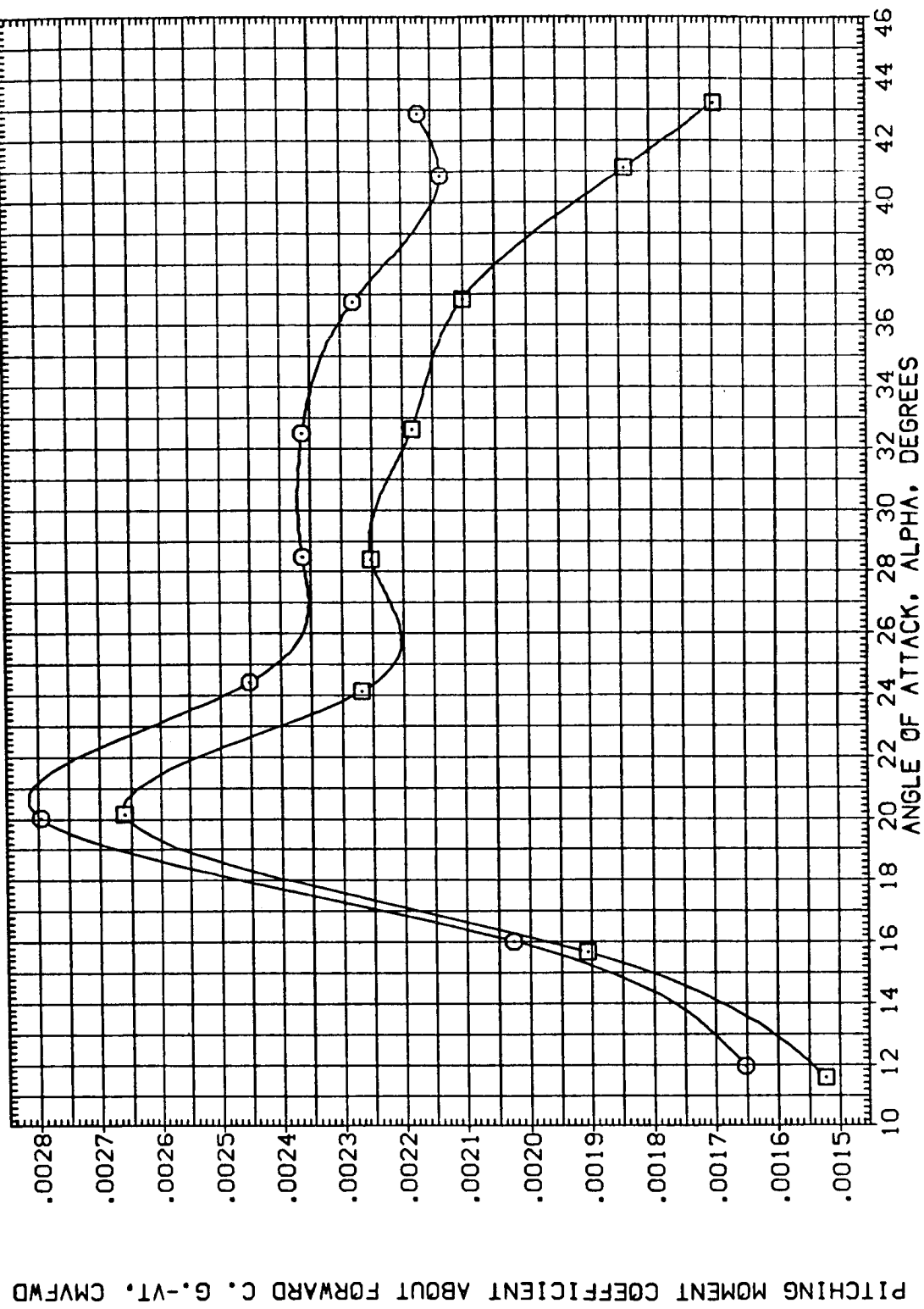


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0016)	AMES 3.5-190 0A98 (011-N24+DUMMY STING)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(BE0020)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

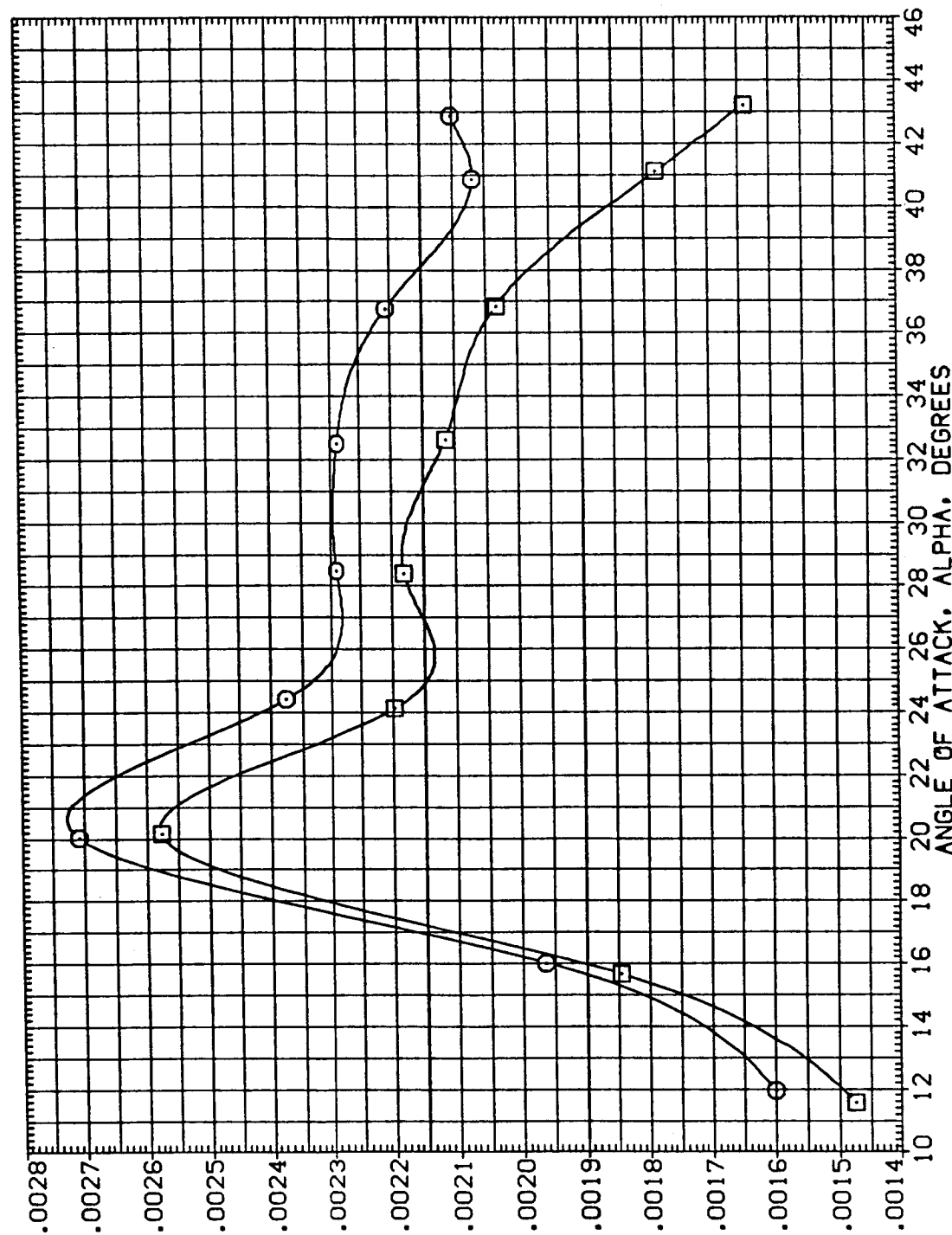


FIG. 6 LONGITUDINAL EFFECT OF OMS PODS.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(MEG001)    AMES 3.5-190 0A98 (011-M7+M14)

(CEG005)    AMES 3.5-190 0A98 (011-M7+M14)

(CEG006)    AMES 3.5-190 0A98 (011-M7+M14)

BETA    ELEVON    BODYLAP    SPOBRK

.000    .000    -11.700    55.000

.000    .000    16.300    55.000

.000    .000    .000    55.000

REFERENCE INFORMATION

SREF    2690.0000    SQ.FT.

LREF    474.8000    IN.

BREF    936.6800    IN.

XMRP    1076.7000    IN.X0

YMRP    .0000    IN.Y0

ZMRP    375.0000    IN.Z0

SCALE    .0150

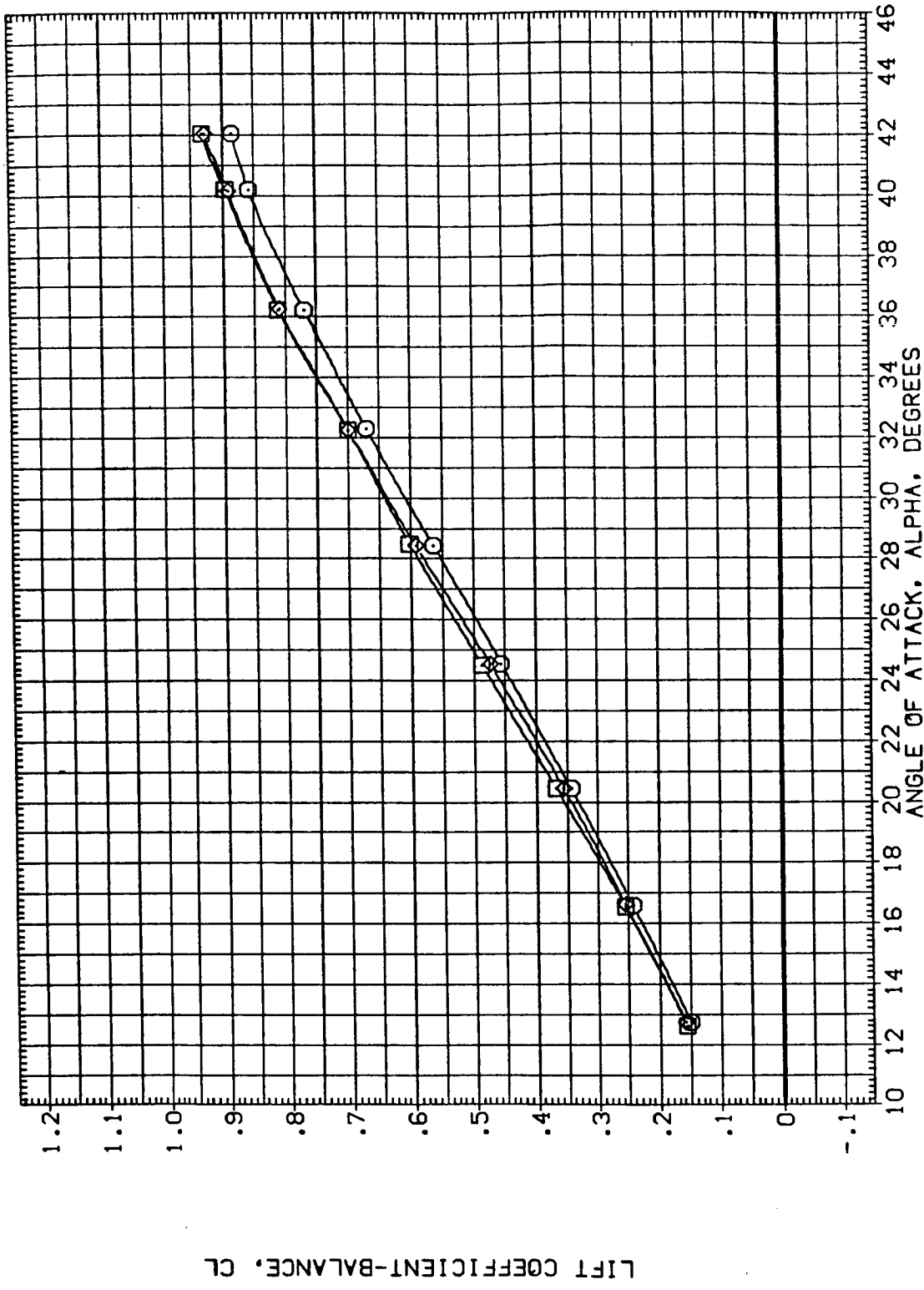


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

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DATA SET SYMBOL      CONFIGURATION DESCRIPTION

(ME0001)      AMES 3.5-190 0A98 (011-M7-M14)

(CE0005)      AMES 3.5-190 0A98 (011-M7-M14)

(CE0006)      AMES 3.5-190 0A98 (011-M7-M14)

BETA      ELEVON      BODYFLAP      SPOBRK

.000      .000      -11.700      55.000

.000      .000      16.300      55.000

.000      .000      .000      55.000

REFERENCE INFORMATION

SREF      2690.0000      SQ.FT.

LREF      474.8000      IN.

BREF      936.6800      IN.

XMRP      1076.7000      IN.X0

YMRP      .0000      IN.Y0

ZMRP      375.0000      IN.Z0

SCALE      .0150

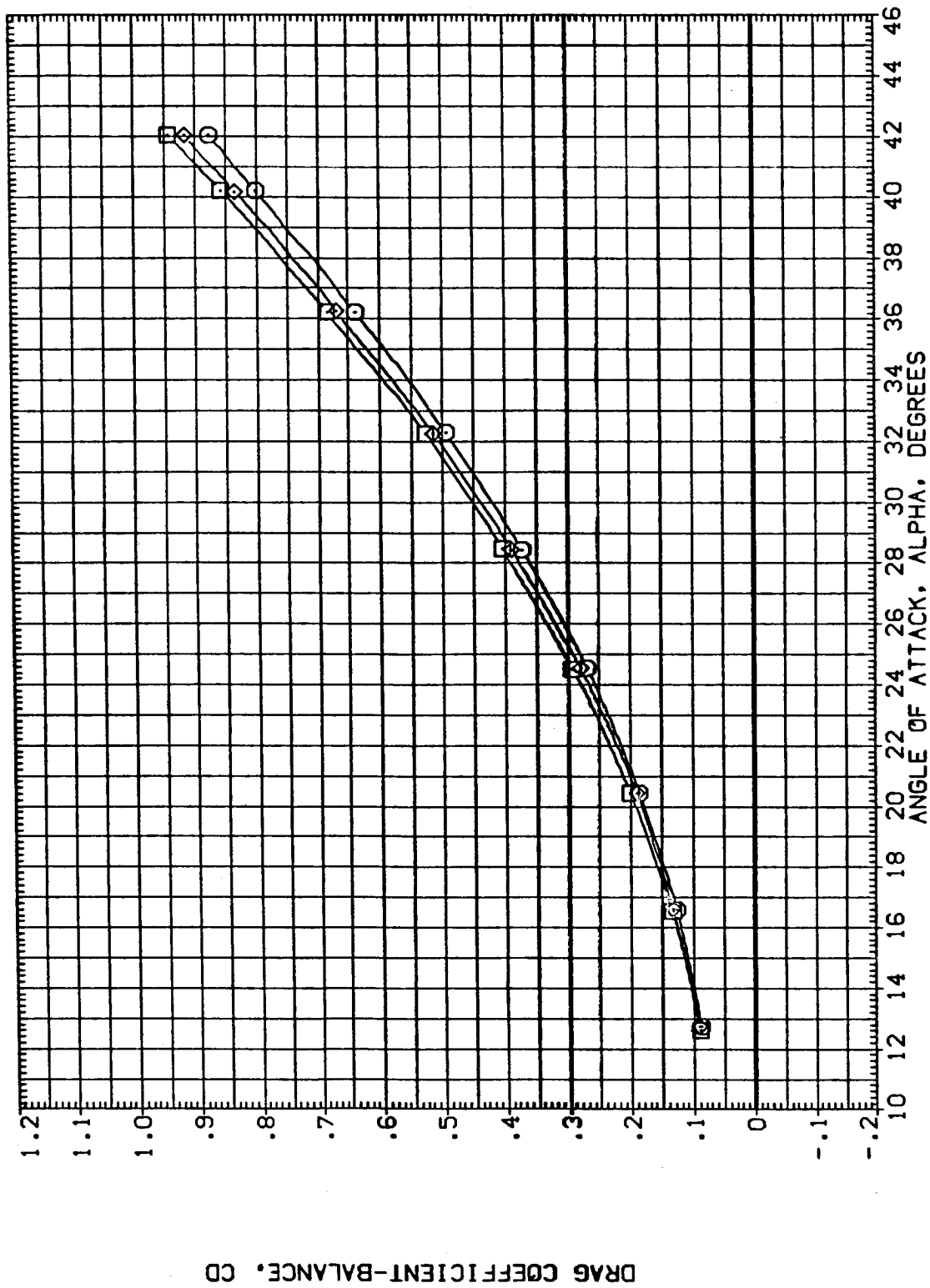


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(ME0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0005)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(CE0006)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

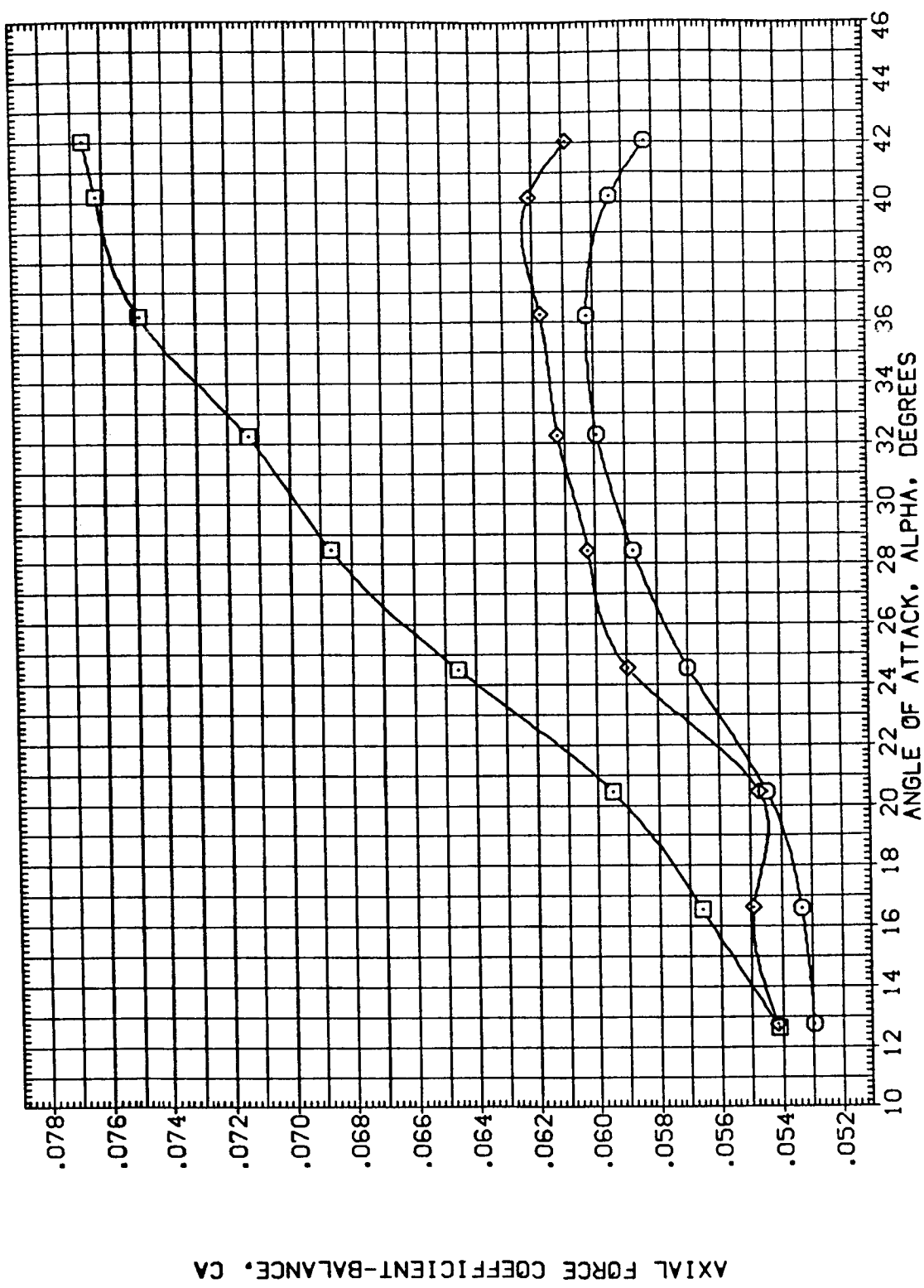


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(A)MACH = 10.27



PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE	INFORMATION
.000	.000	-11.700	SREF	2650.0000	SQ.FT.
.000	.000	.000	LREF	474.8000	IN.
.000	.000	16.300	BREF	936.6800	IN.
.000	.000	.000	XMRP	1076.7000	IN.
			YMRP	.0000	IN.
			ZMRP	375.0000	IN.
			SCALE	.0150	IN.

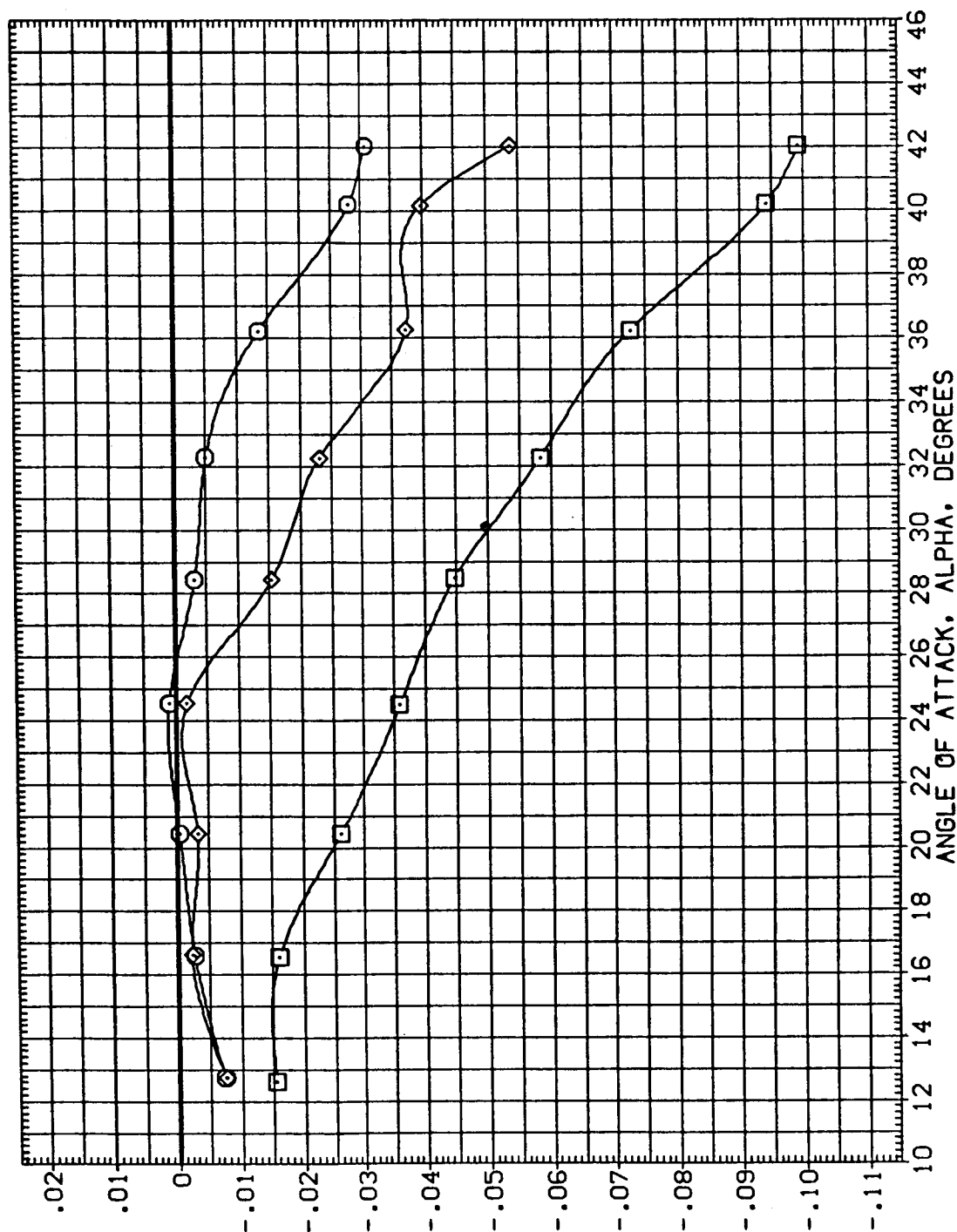


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

$$[A]_{MACH} = 10.27$$

DATA SET SYMBOL      CONFIGURATION DESCRIPTION

(ME0001)      AVES 3.5-190 0A98 (011-M7+M14)

(CE0005)      AVES 3.5-190 0A98 (011-M7+M14)

(CE0006)      AVES 3.5-190 0A98 (011-M7+M14)

BETA      ELEVON      BODYFLAP      SPODBRY

.000      .000      -11.700      55.000

.000      .000      16.300      55.000

.000      .000      .000      55.000

REFERENCE INFORMATION

SREF      2690.0000      SQ.FT.

LREF      474.8000      IN.

BREF      936.6800      IN.

XMRP      1076.7000      IN.X0

YMRP      .0000      IN.Y0

ZMRP      375.0000      IN.Z0

SCALE      .0150

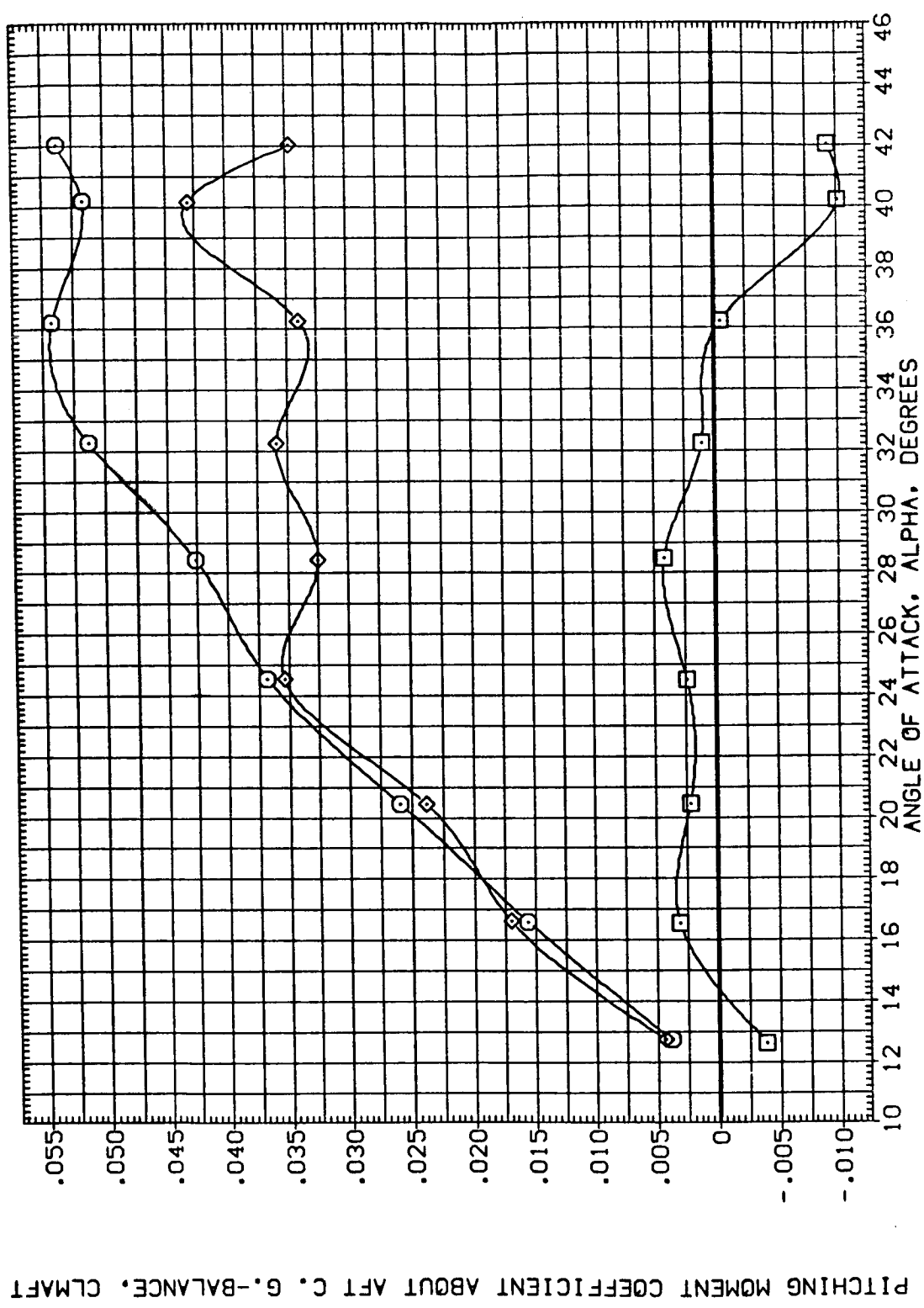


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

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DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (ME0001) AMES 3.5-190 0A98 (011-M7+M14)  
 (CE0005) AMES 3.5-190 0A98 (011-M7+M14)  
 (CE0006) AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK  
 .000 .000 -11.700 55.000  
 .000 .000 16.300 55.000  
 .000 .000 .000 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

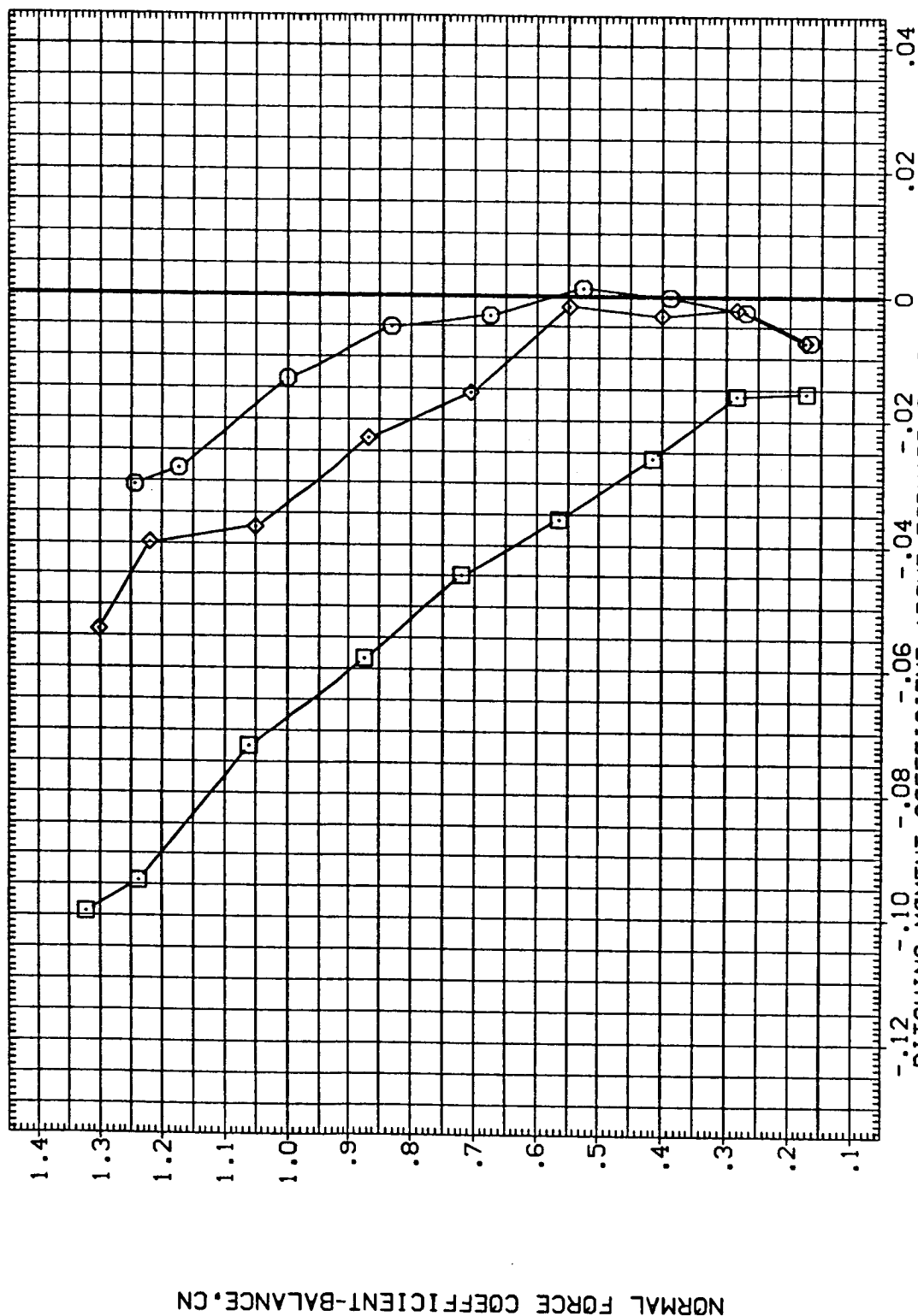


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

CA/MACH = 10.27

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(ME0001)    AMES 3.5-190 0A98 (011-M7+M14)

(CE0005)    AMES 3.5-190 0A98 (011-M7+M14)

(CE0006)    AMES 3.5-190 0A98 (011-M7+M14)

BETA    ELEVON    BOFLAP    SPDBRK

.000    .000    -11.700    55.000

.000    .000    16.300    55.000

.000    .000    .000    55.000

REFERENCE INFORMATION

SREF    2690.0000    50.FT.

LREF    474.8000    IN.

BREF    936.5800    IN.

XMRP    1076.7000    IN.X0

YMRP    .0000    IN.Y0

ZMRP    375.0000    IN.Z0

SCALE    .0150

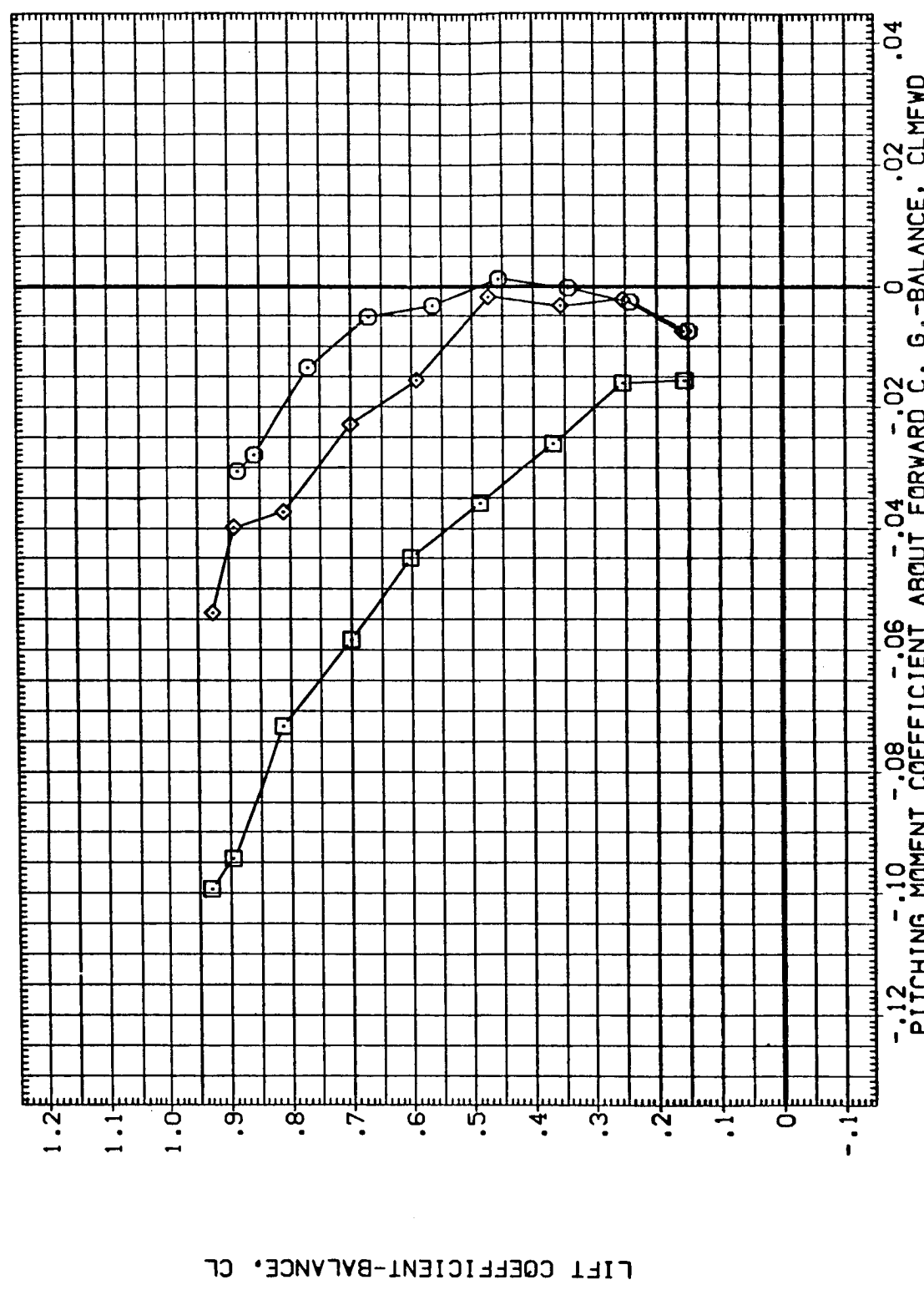


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

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BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE	INFORMATION
.000	.000	-11.700	55.000	SREF	2630.0000
.000	.000	.000	55.000	LREF	474.8000
.000	.000	16.300	55.000	BREF	936.5800
.000	.000	.000	55.000	XMRP	1076.7000
				YMRP	.0000
				ZMRP	3775.0000
				SCALE	.0150

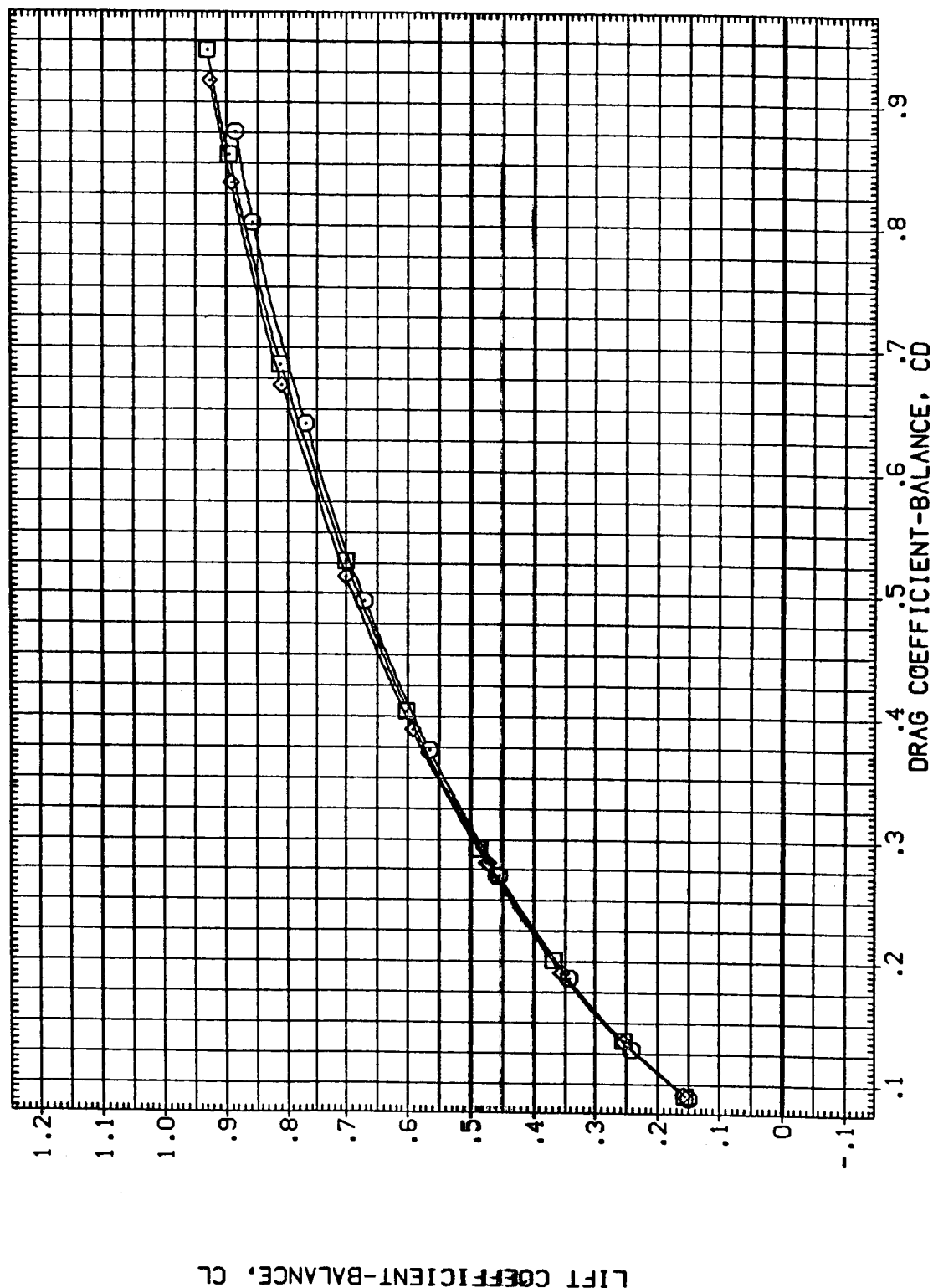


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

**CAMACH = 10.27**

DATA SET SYMBOL  
(NE0001)  
(EE0005)  
(EE0006)

CONFIGURATION DESCRIPTION  
AVES 3.5-190 OAS8 (011-M7+M14)  
AVES 3.5-190 OAS8 (011-M7+M14)  
AVES 3.5-190 OAS8 (011-M7+M14)

BETA  
.000  
.000  
.000

ELEVON  
.000  
.000  
.000

BOFLAP  
-11.700  
16.300  
.000

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

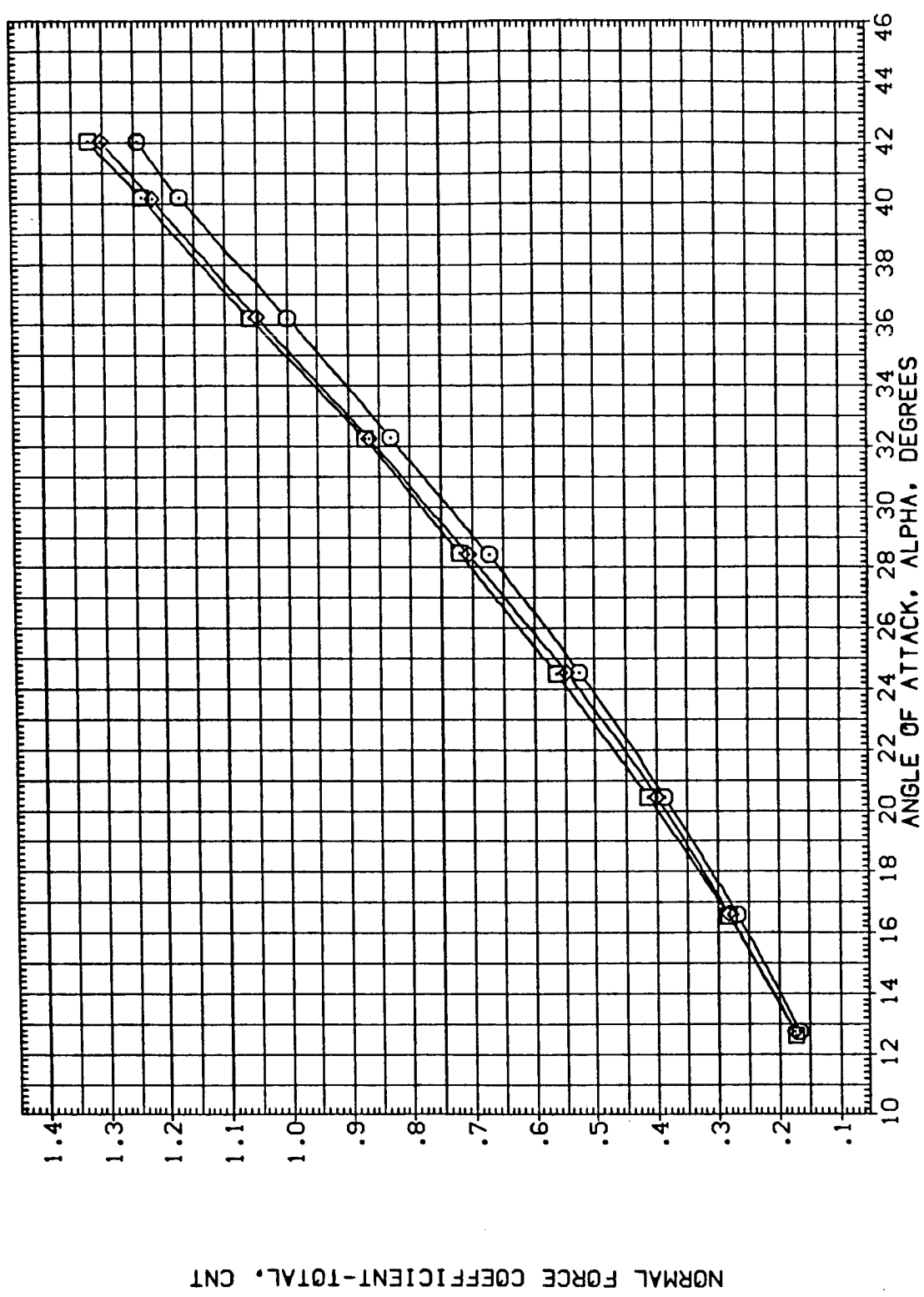


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(A)MACH = 10.27  
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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(NEQ001)	AMES 3.5-190 0A98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ005)	AMES 3.5-190 0A98 (011-M7-M14)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EEQ006)	AMES 3.5-190 0A98 (011-M7-M14)	.000	.000	.000	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

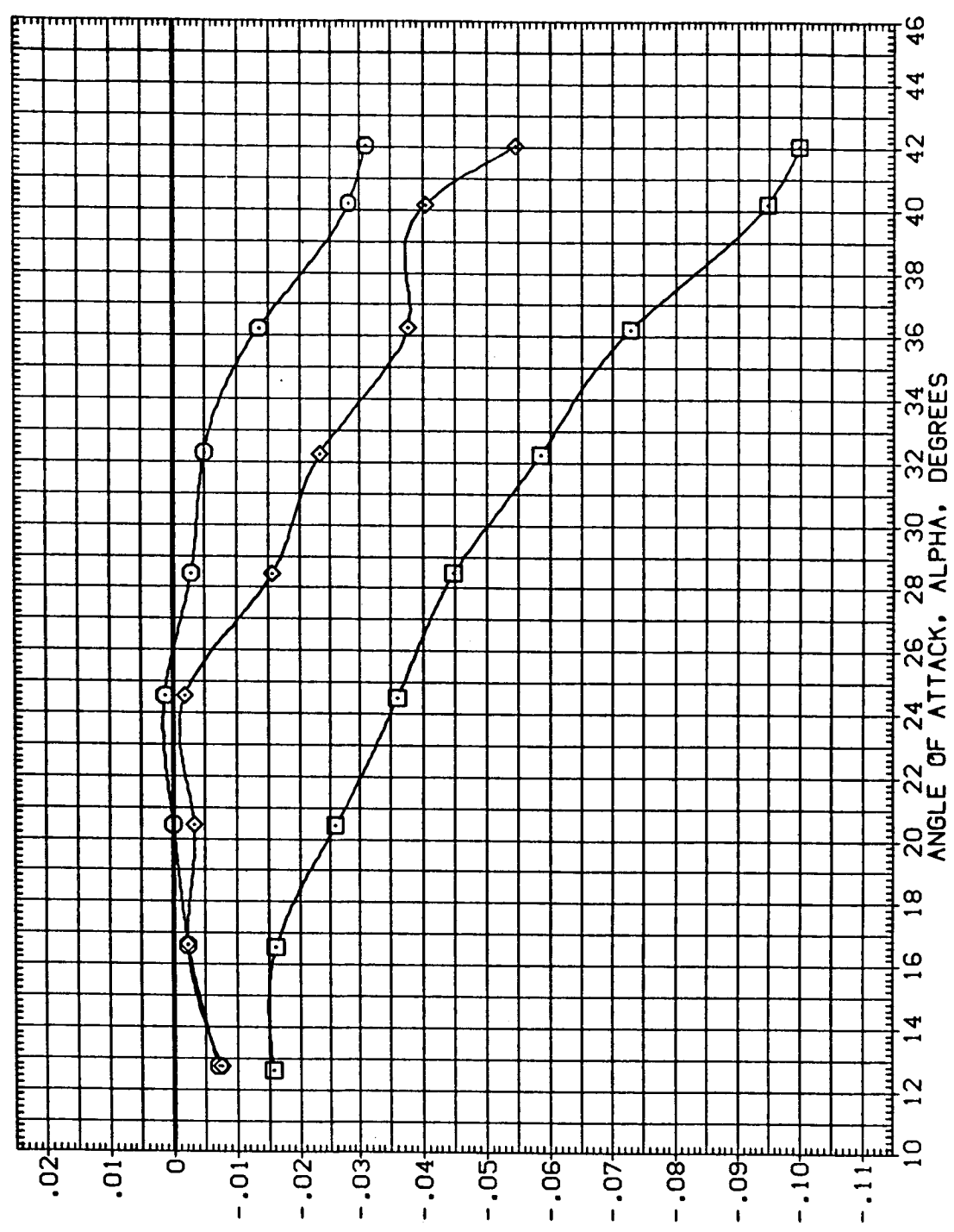


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

CA/MACH = 10.27

DATA SET SYMBOL      CONFIGURATION DESCRIPTION

(NEG001)      AVES 3.5-190 0A98 (011-17+M14)

(EEG005)      AVES 3.5-190 0A98 (011-17+M14)

(EEG006)      AVES 3.5-190 0A98 (011-17+M14)

BETA      ELEVON      BOFLAP      SPOBRK

.000      .000      -11.700      55.000

.000      .000      16.300      55.000

.000      .000      .000      55.000

REFERENCE INFORMATION

SREF      2690.0000      SQ.FT.

LREF      474.8000      IN.

BREF      936.6800      IN.

XMRP      1076.7000      IN.

YMRP      .0000      IN.

ZMRP      375.0000      IN.

SCALE      .0150

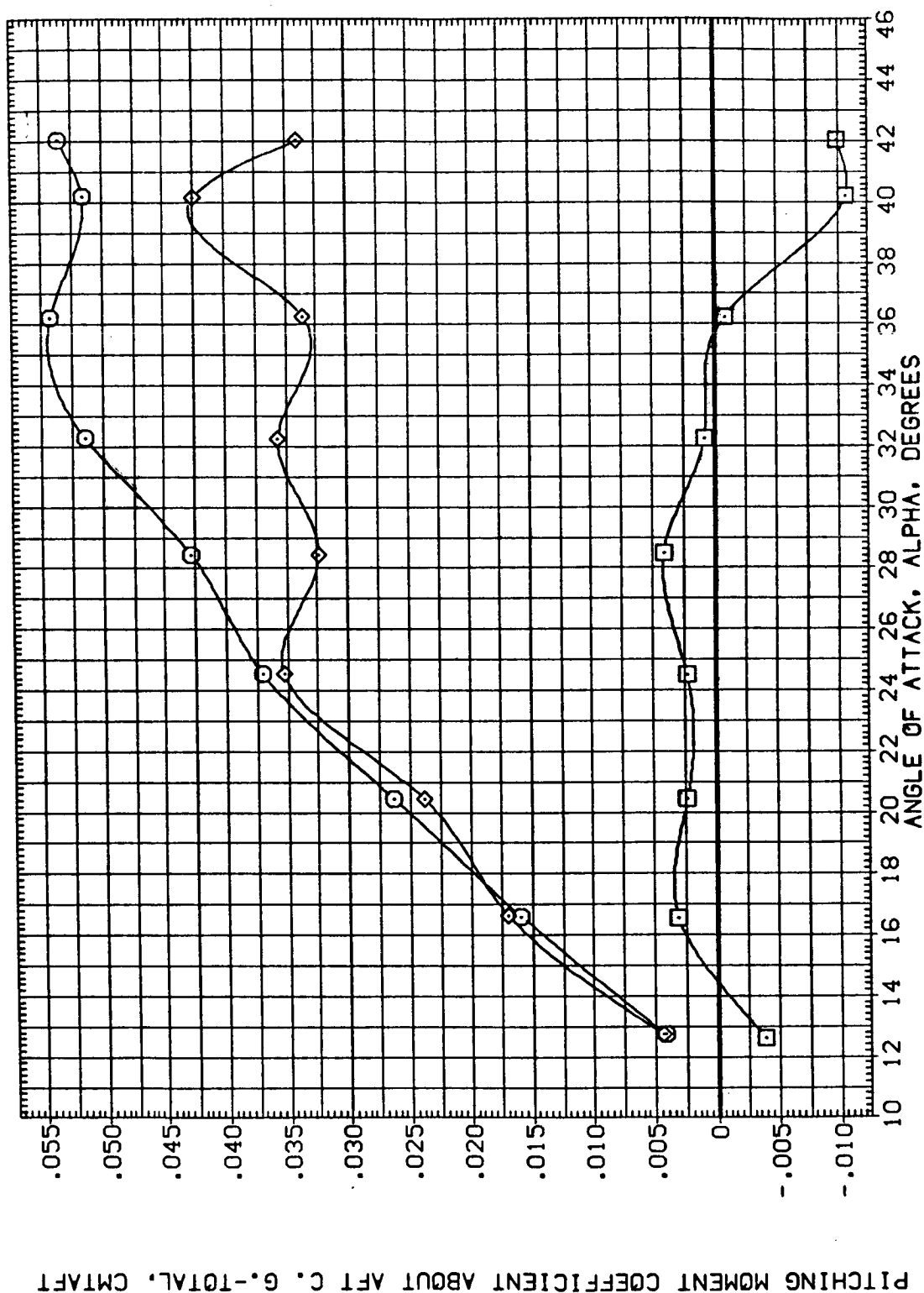


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(A) MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(NE0001)	AMES 3.5-190 OAS8 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0005)	AMES 3.5-190 OAS8 (011-M7+M14)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EE0006)	AMES 3.5-190 OAS8 (011-M7+M14)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

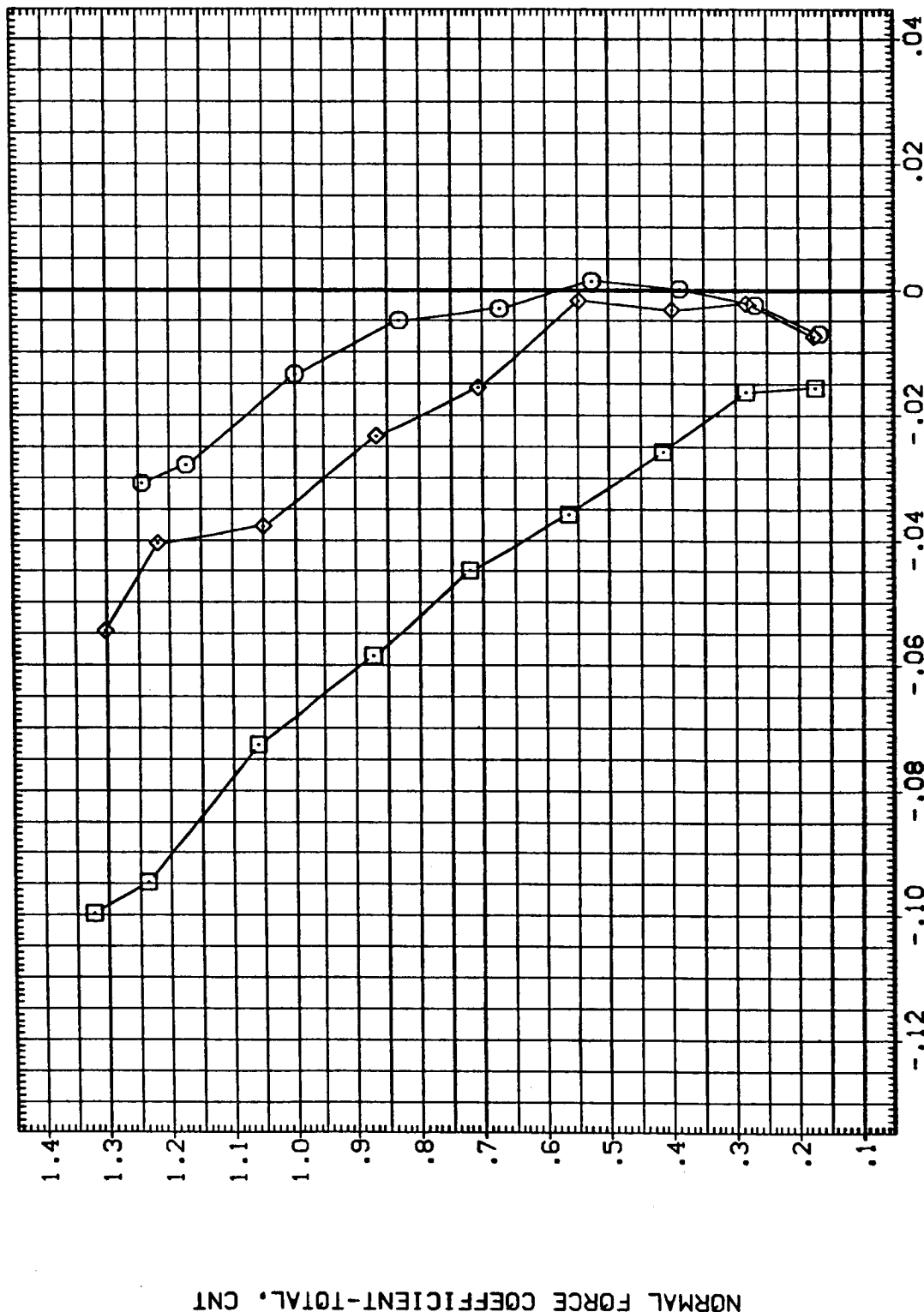


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (NE0001) AMES 3.5-190 0A98 (011-M7-M14)  
 (EE0005) AMES 3.5-190 0A98 (011-M7-M14)  
 (EE0006) AMES 3.5-190 0A98 (011-M7-M14)

BETA ELEVON BOFLAP SPOBRK  
 .000 .000 -11.700 55.000  
 .000 .000 16.300 55.000  
 .000 .000 .000 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

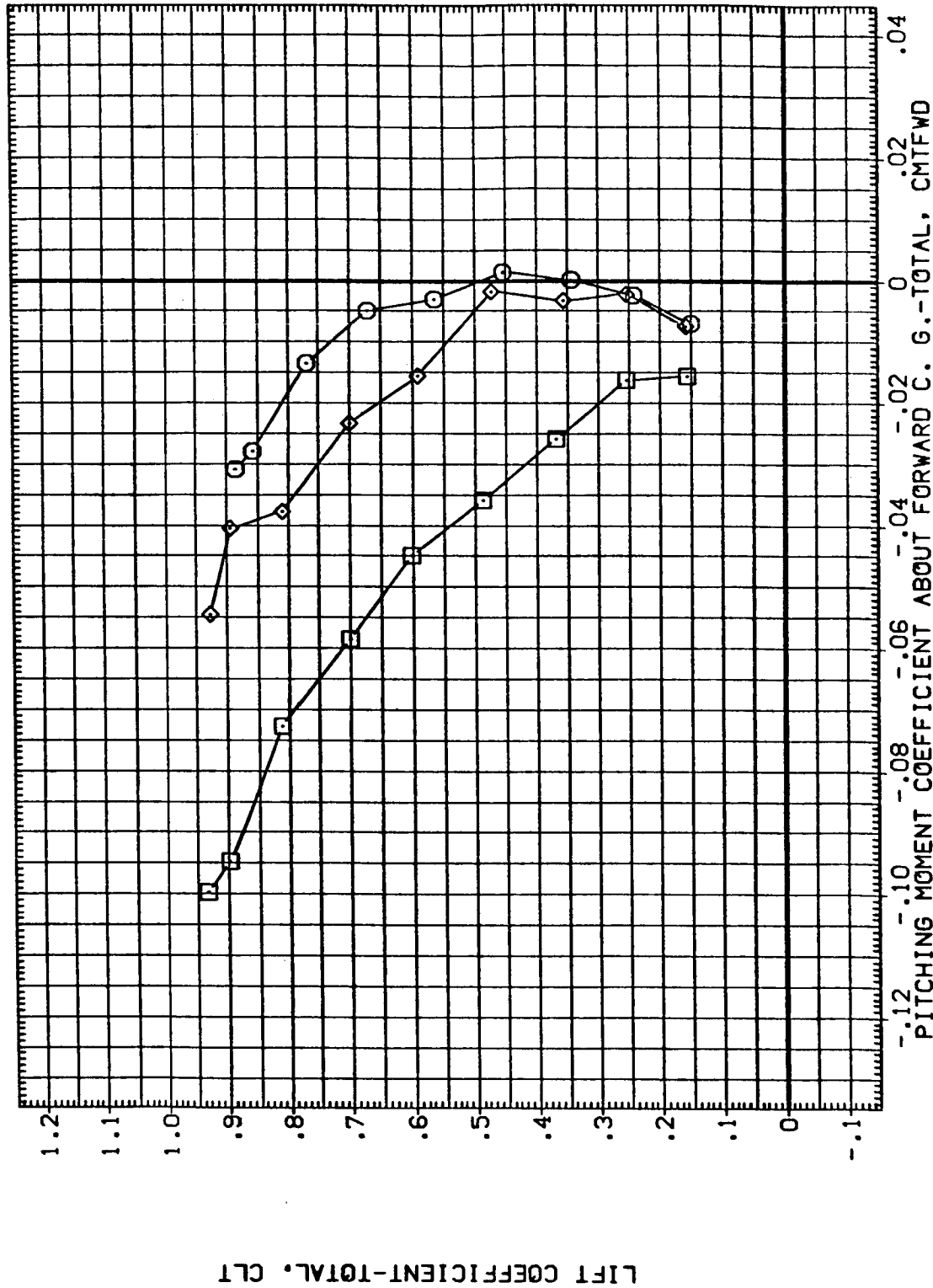


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(NEQ001)	AMES 3.5-190 OA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ005)	AMES 3.5-190 OA98 (011-M7+M14)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EEQ006)	AMES 3.5-190 OA98 (011-M7+M14)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

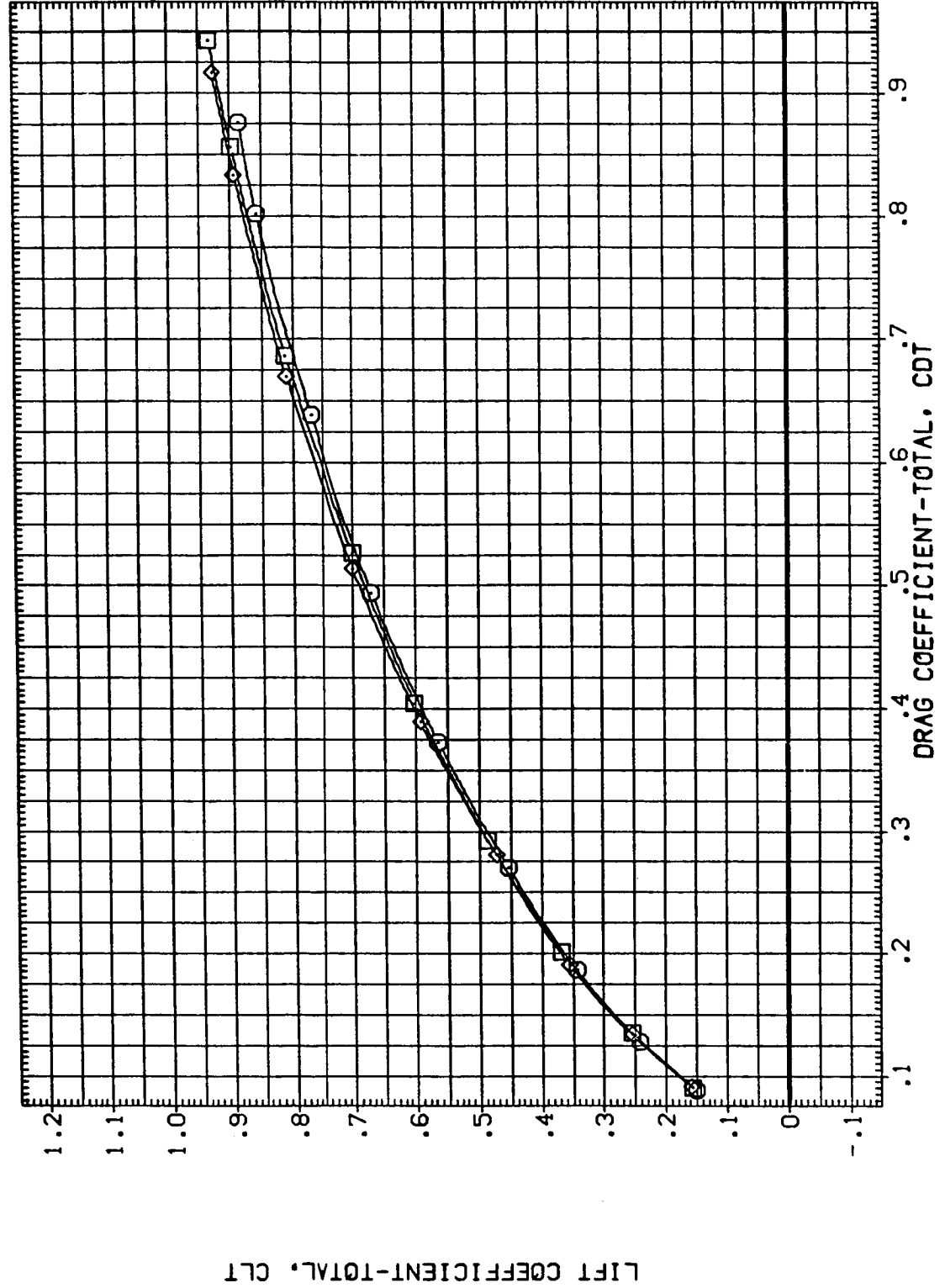


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(A)MACH = 10.27

DATA SET SYMBOL      CONFIGURATION DESCRIPTION

(NE0001)      AVES 3.5-190 0A98 (011-M7+M14)

(EE0005)      AVES 3.5-190 0A98 (011-M7+M14)

(EE0006)      AVES 3.5-190 0A98 (011-M7+M14)

BETA      ELEVON      BODYFLAP      SPODBRK      REFERENCE INFORMATION

.000      .000      -11.700      55.000      SREF 2690.0000      SQ.FT.

.000      .000      16.300      55.000      LREF 474.8000      IN.

.000      .000      .000      55.000      BREF 936.6800      IN.

XMRP 1076.7000      IN.X0

YMRP .0000      IN.Y0

ZMRP 375.0000      IN.Z0

SCALE .0150

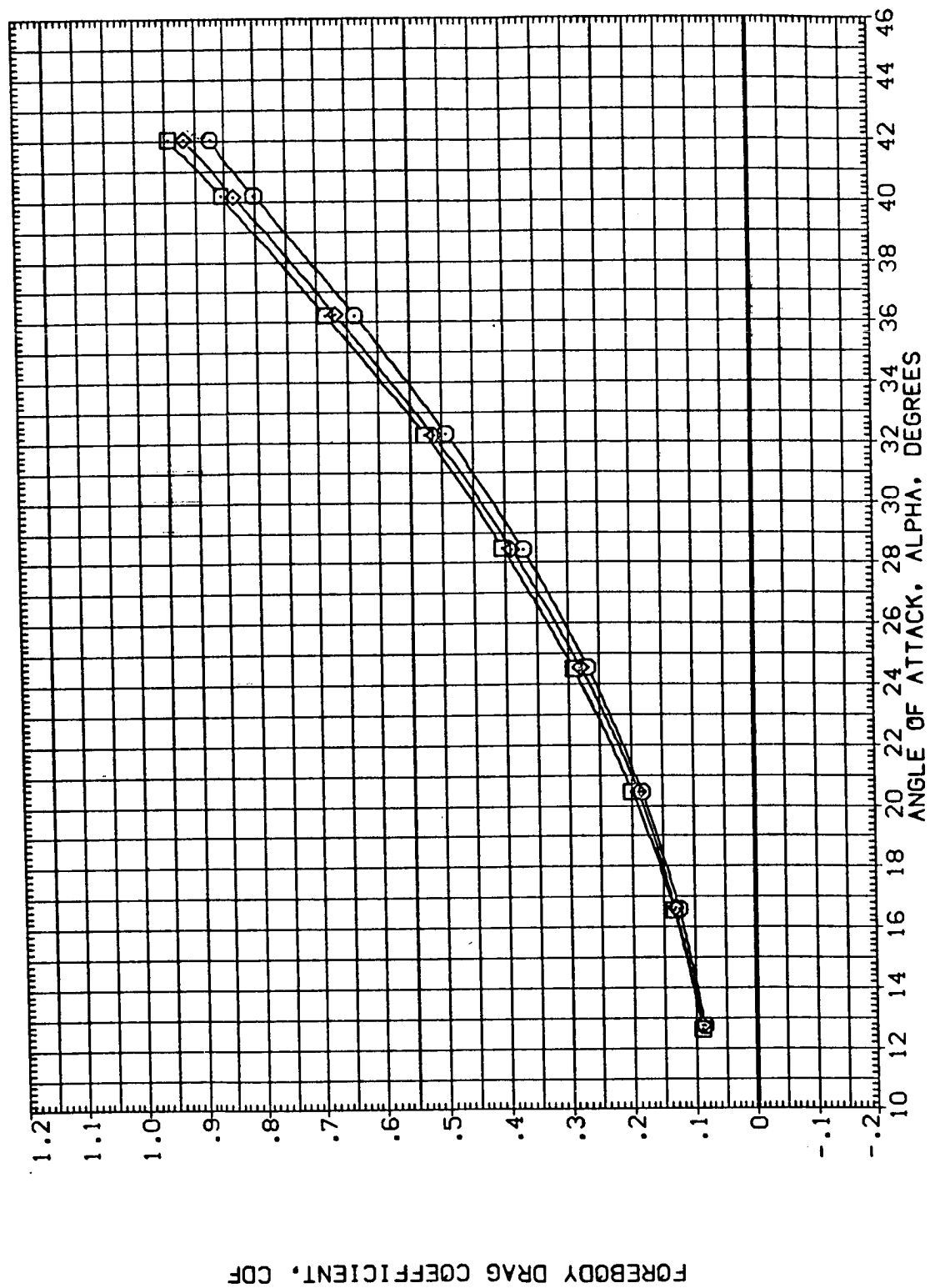


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(NE0001)	AMES 3.5-190 0/98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0005)	AMES 3.5-190 0/98 (011-M7+M14)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EE0006)	AMES 3.5-190 0/98 (011-M7+M14)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

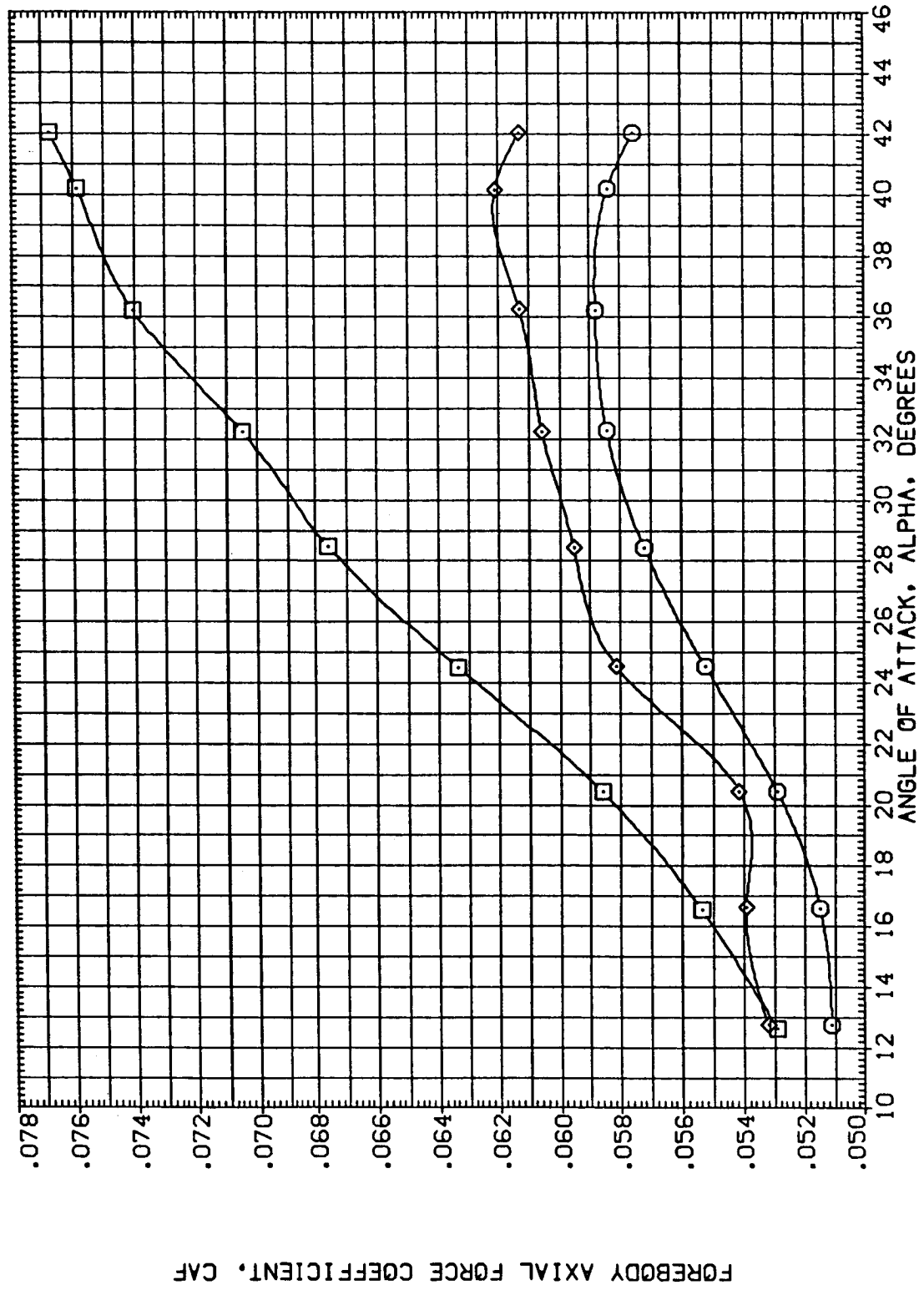


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(NEG0001)	AMES 3.5-190 GA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2630.0000 SQ.FT.
(EEG0005)	AMES 3.5-190 GA98 (011-M7+M14)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EEG0006)	AMES 3.5-190 GA98 (011-M7+M14)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

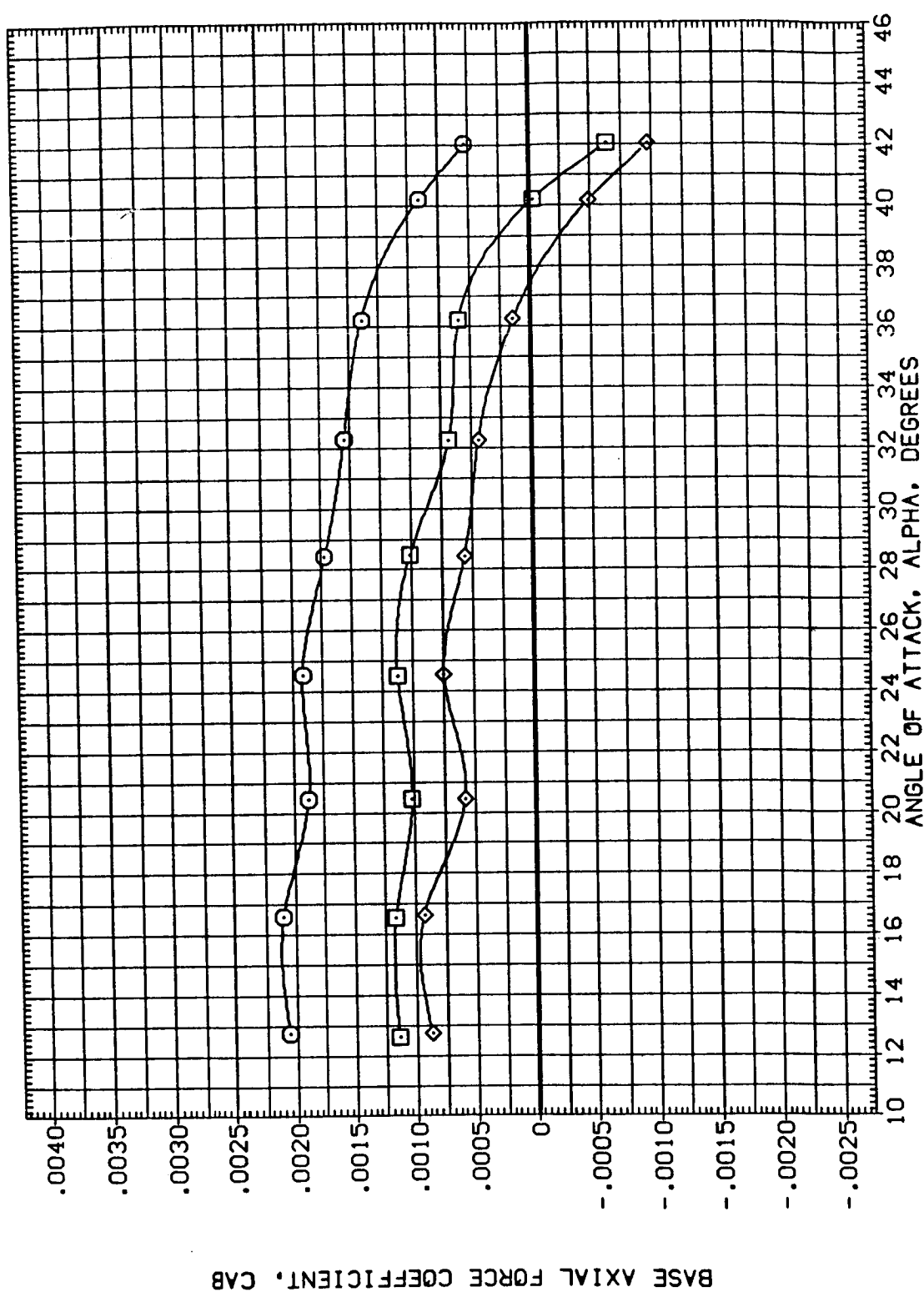


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(LE0001)	AVES 3.5-190 OAS8 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0005)	AVES 3.5-190 OAS8 (011-M7+M14)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(BE0006)	AVES 3.5-190 OAS8 (011-M7+M14)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

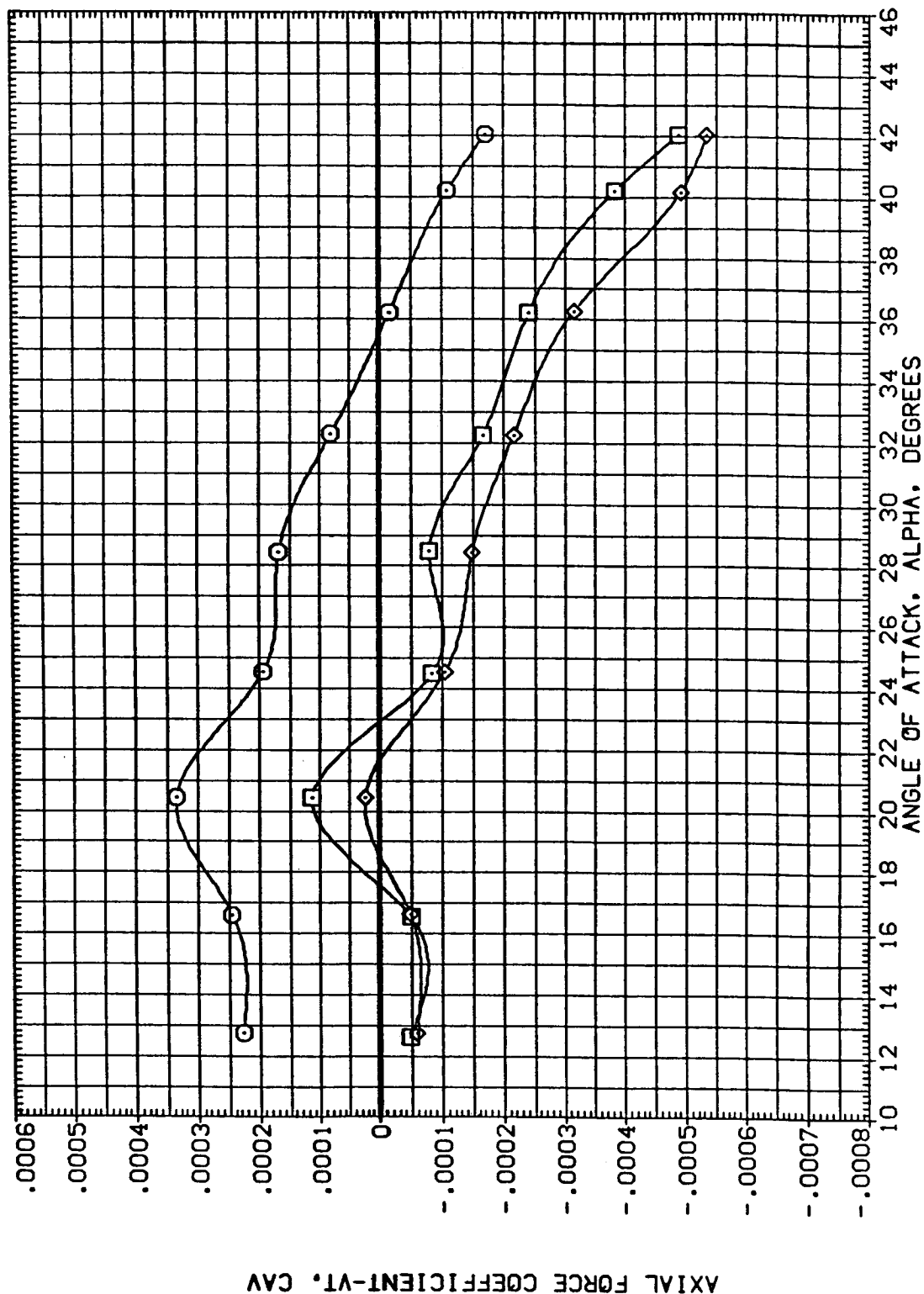


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(A)MACH = 10.27

DATA SET SYMBOL  
(LEG001)  
(LEG005)  
(LEG006)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 QAS8 (011-M7+M14)  
AMES 3.5-190 QAS8 (011-M7+M14)  
AMES 3.5-190 QAS8 (011-M7+M14)

BETA  
.000  
.000  
.000

ELEVON  
.000  
.000  
.000

BOFLAP  
-11.700  
16.300  
.000

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X  
YMRP .0000 IN.Y  
ZMRP 375.0000 IN.Z  
SCALE .0150

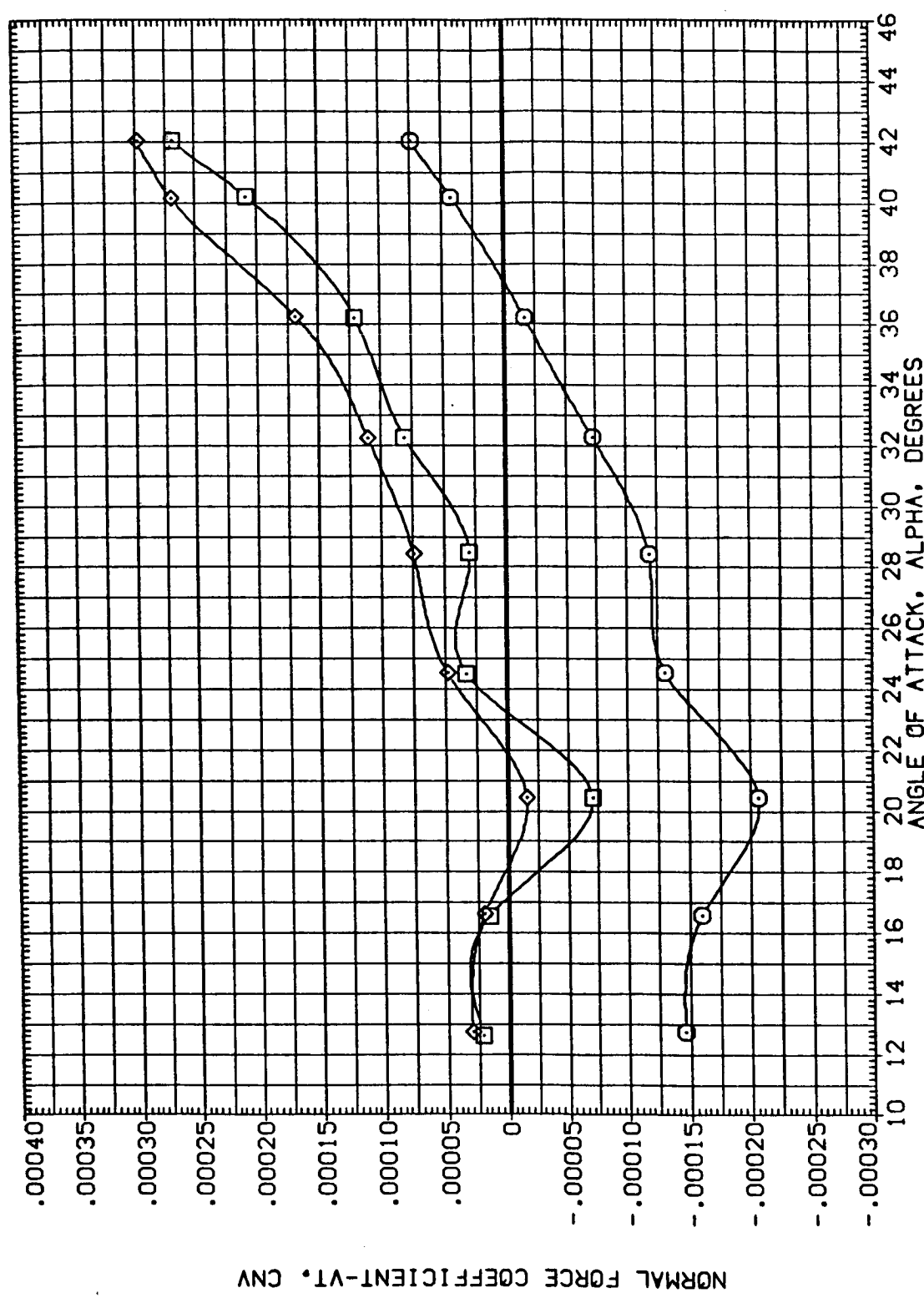


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27



DATA SET SYMBOL    CONFIGURATION DESCRIPTION    REFERENCE INFORMATION

(LE0001)	AMES 3.5-190 0A98 (011-M7+M14)	SREF	2690.0000	SQ.FT.
(BE0005)	AMES 3.5-190 0A98 (011-M7+M14)	LREF	474.8000	IN.
(BE0006)	AMES 3.5-190 0A98 (011-M7+M14)	BREF	936.6800	IN.
		XMRP	1076.7000	IN.X0
		YMRP	.0000	IN.Y0
		ZMRP	375.0000	IN.Z0
		SCALE	.0150	

BETA    ELEVON    BOFLAP    SPOBRK

.000	.000	-11.700	55.000
.000	.000	16.300	55.000
.000	.000	.000	55.000

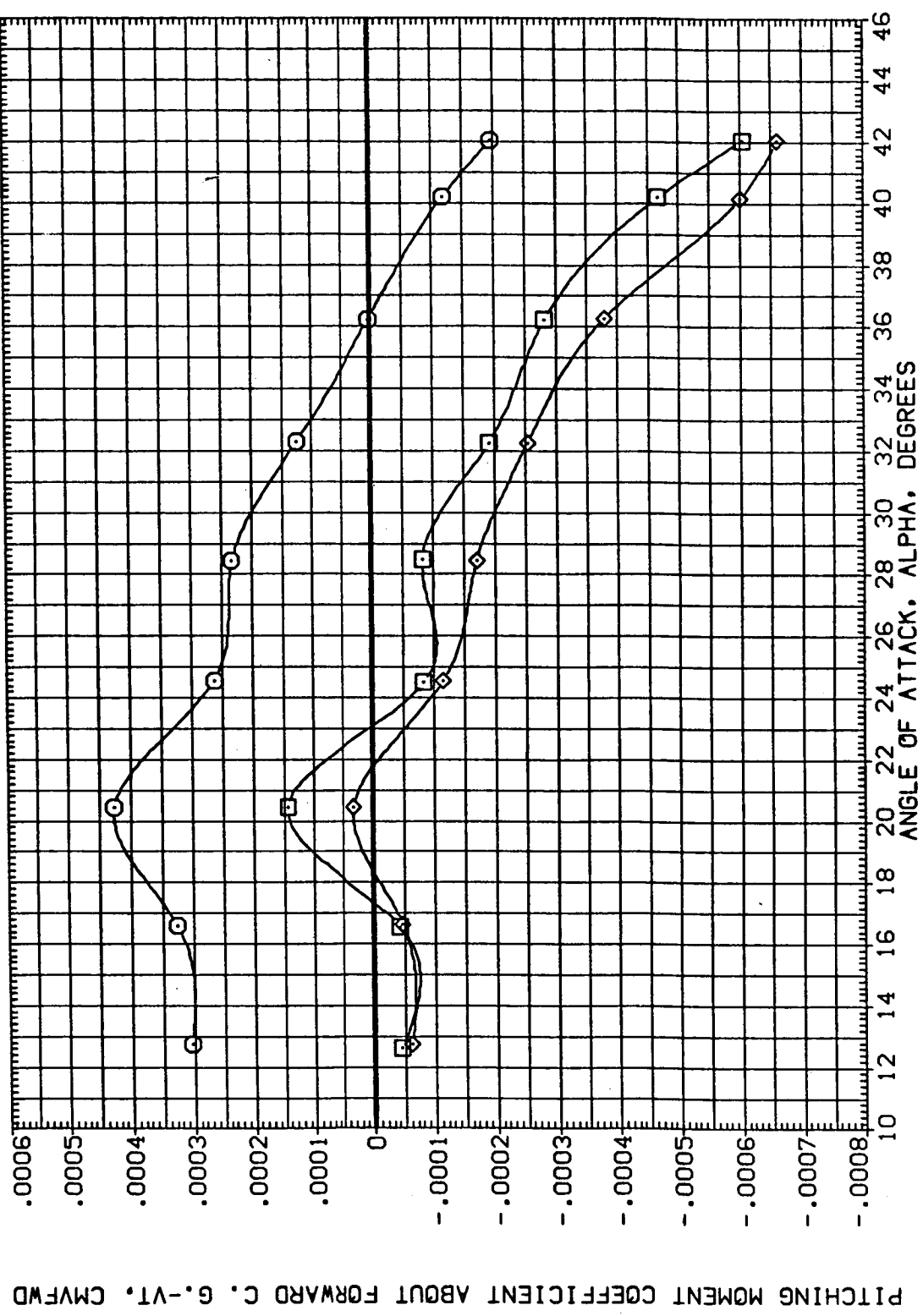


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

DATA SET SYMBOL  
(LE0001)  
(BE0005)  
(BE0006)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7+M14)  
AMES 3.5-190 0A98 (011-M7+M14)  
AMES 3.5-190 0A98 (011-M7+M14)

BETA  
.000  
.000  
.000

ELEVON  
.000  
.000  
.000

BOFLAP  
-11.700  
16.300  
.000

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

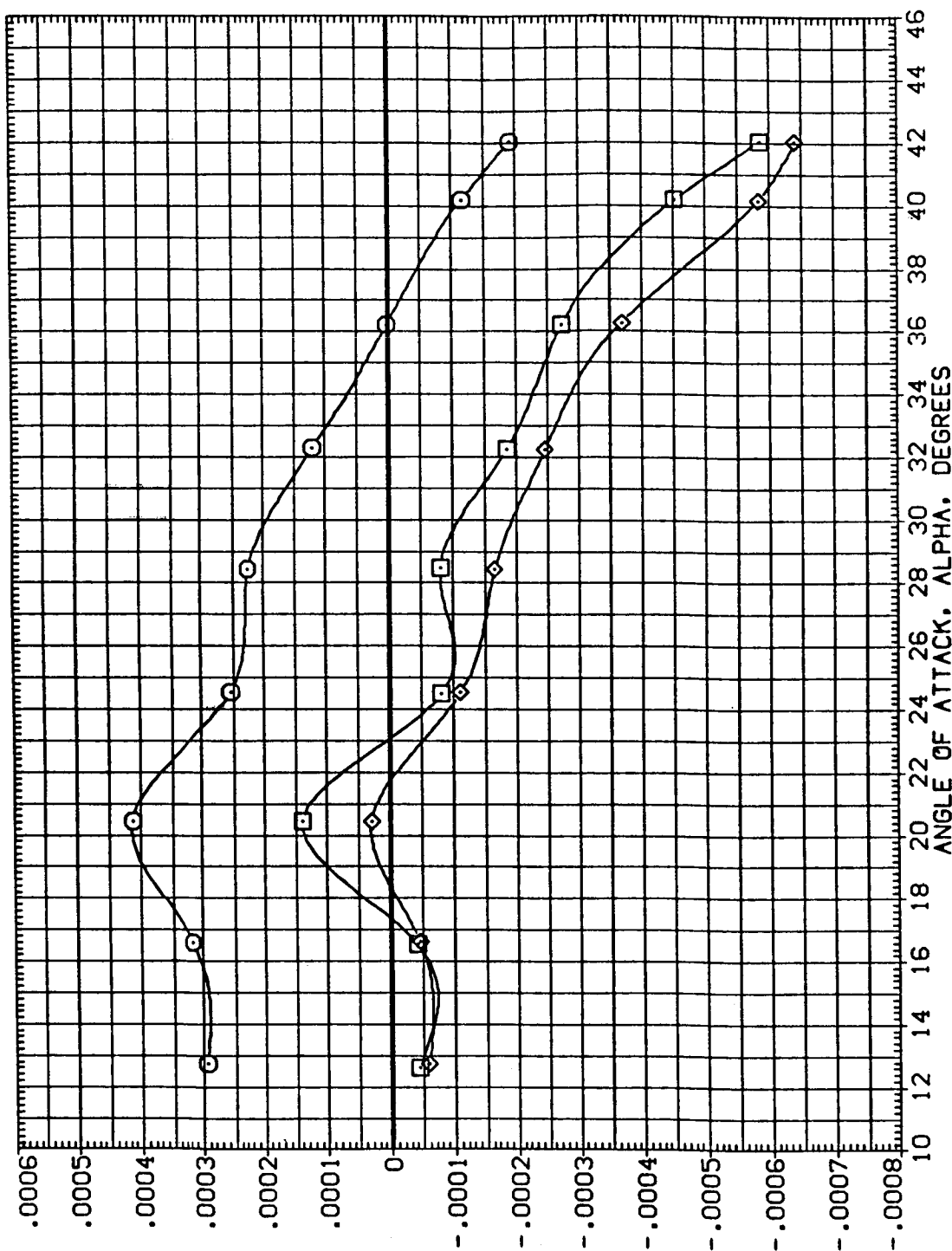


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION			
(MEQ017)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF	2690.0000	50.FT.	
(CE0021)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF	474.8000	IN.	
(CE0022)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF	936.6800	IN.	XG
						XMRP	1076.7000	IN.	Y0
						YMRP	.0000	IN.	Z0
						ZMRP	375.0000	IN.	Z0
						SCALE	.0150		

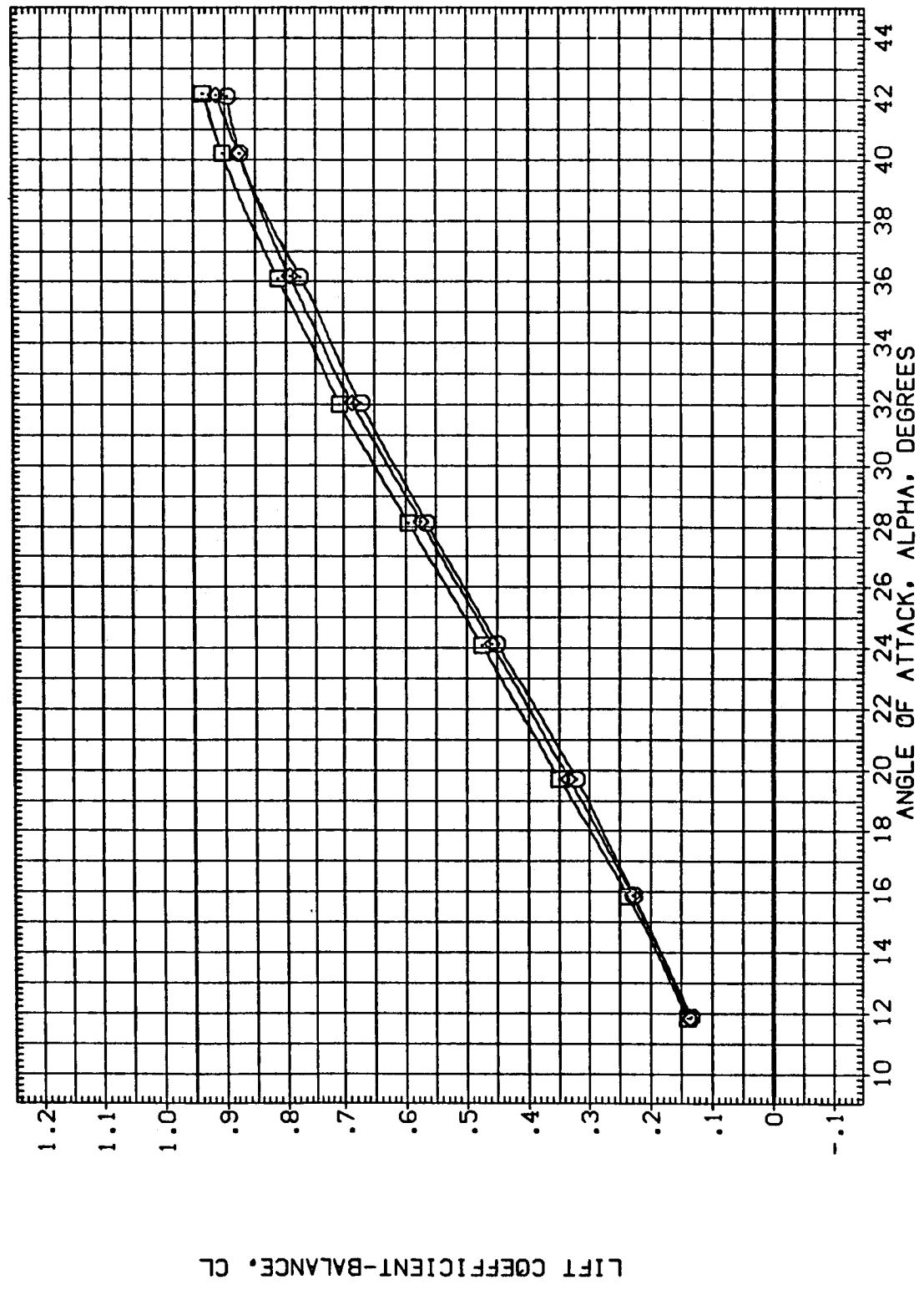


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 10.27

DATA SET SYMBOL  
(ME0017)  
(CE0021)  
(CE0022)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)  
AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)  
AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
.000  
.000  
.000

BOFLAP  
-11.700  
16.300  
.000

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6000 IN.  
XMRP 1076.7000 IN.XB  
YMRP 375.0000 IN.YB  
ZMRP .0150

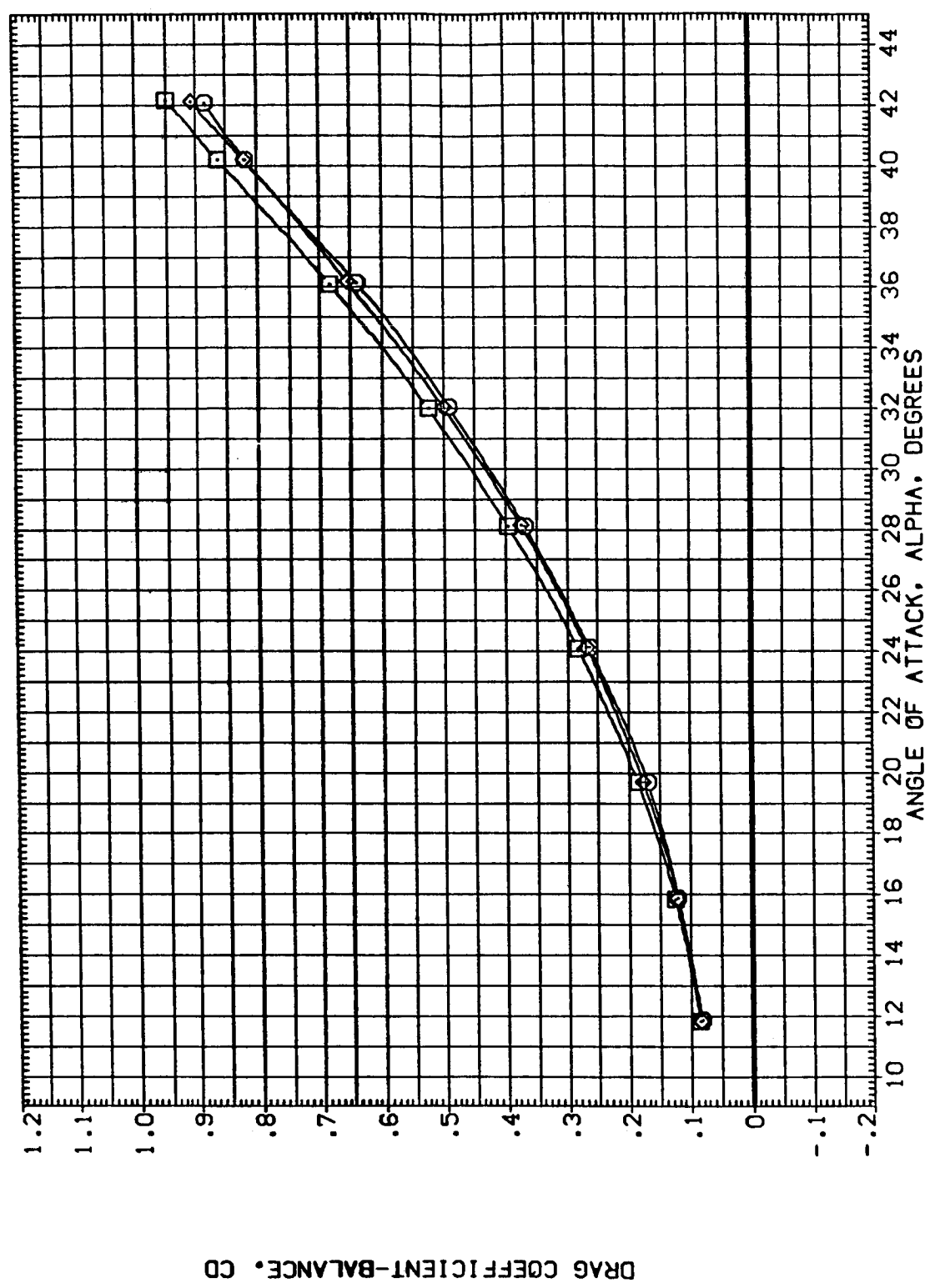


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(M)MACH = 10.27  
PAGE 296



DATA SET SYMBOL  
 (ME0017)  
 (CE0021)  
 (CE0022)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)  
 AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA  
 .000  
 .000  
 .000

ELEVON  
 .000  
 .000  
 .000

BOFLAP  
 -11.700  
 16.300  
 .000

SPOBRK  
 55.000  
 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

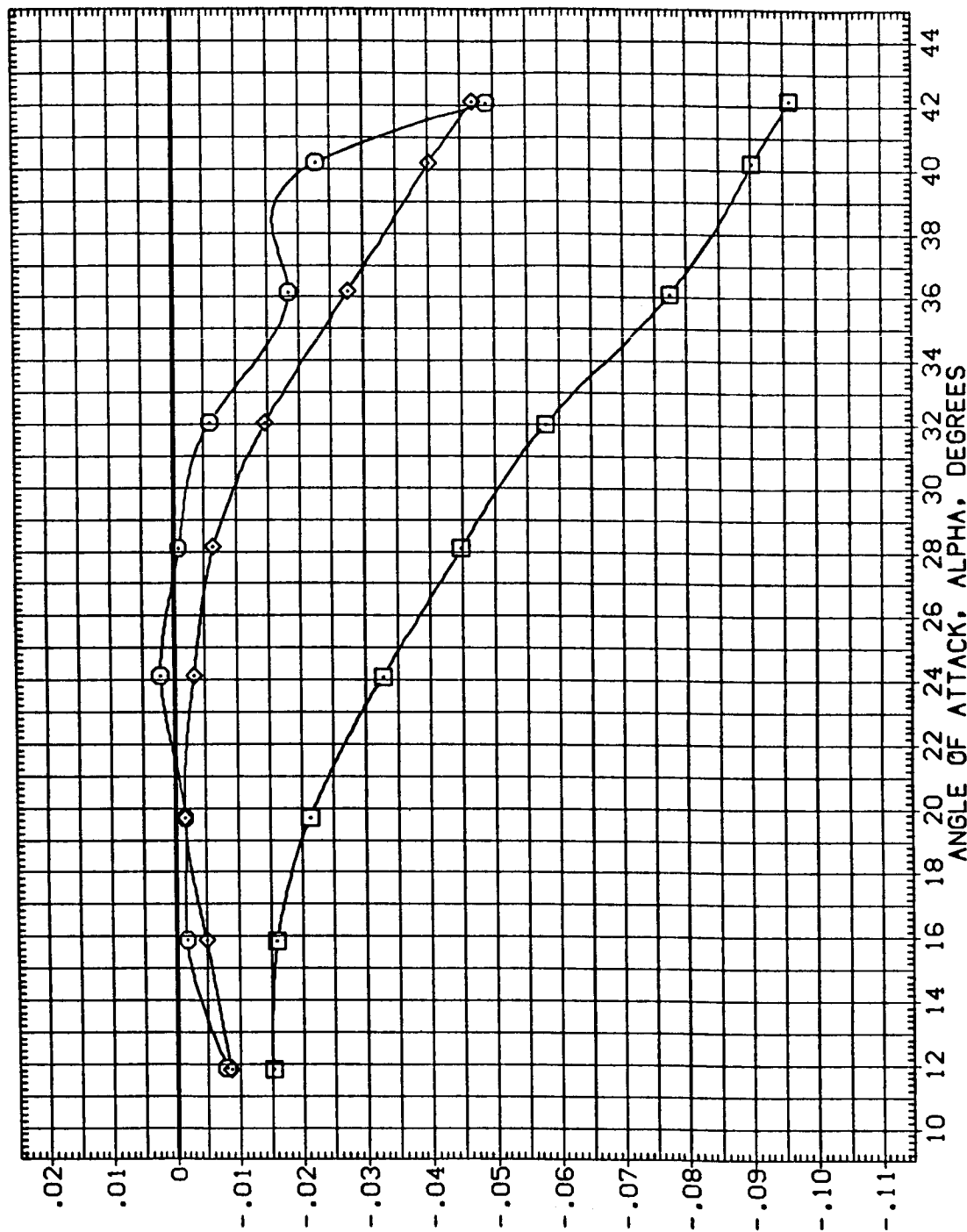


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 10.27  
 PAGE 298

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(ME0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(CE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

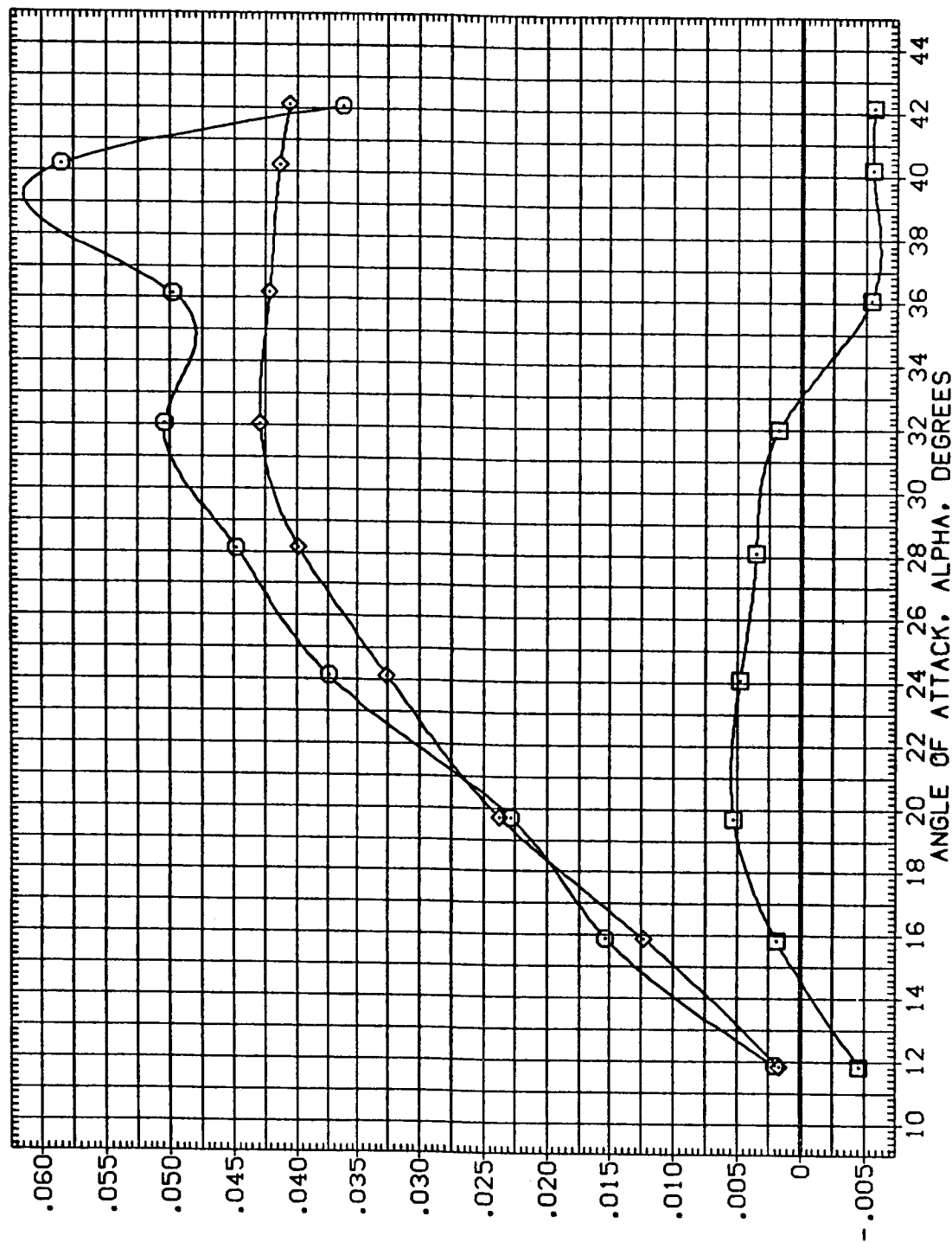


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(ME0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(CE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE 375.0000 IN.Z0

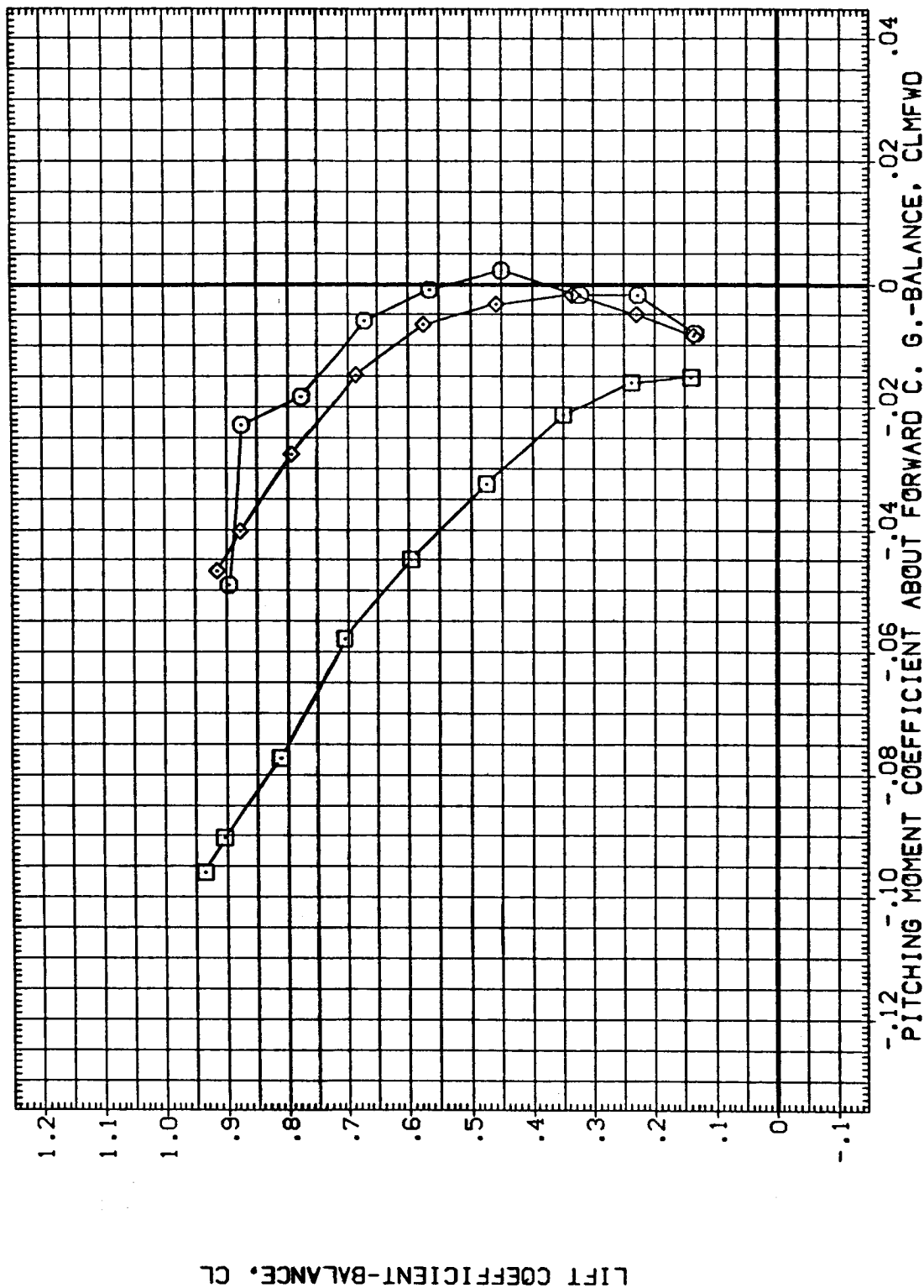


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(ME0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(CE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

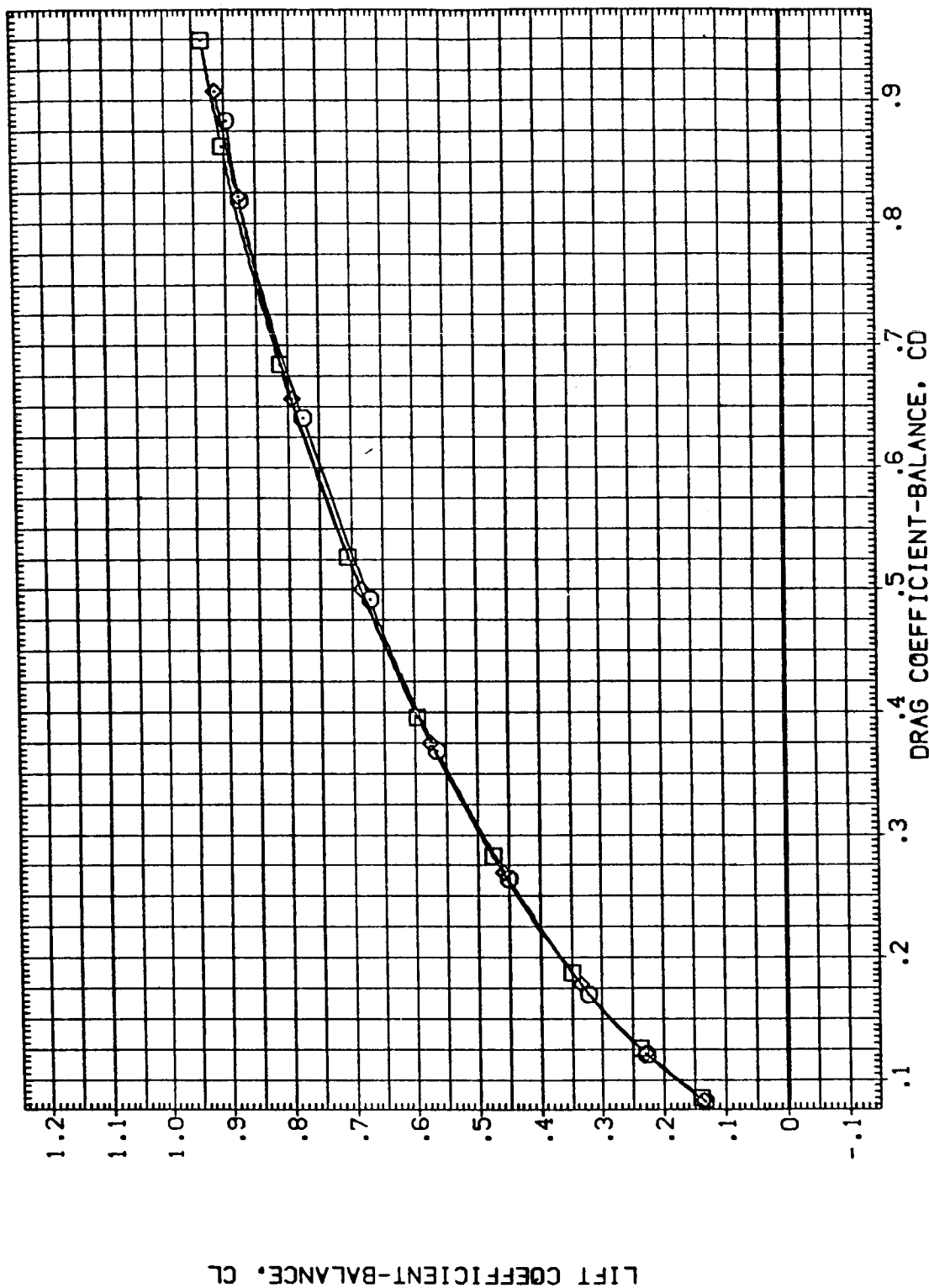


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

CA/MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(NE0017)	AVES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	AVES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EE0022)	AVES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

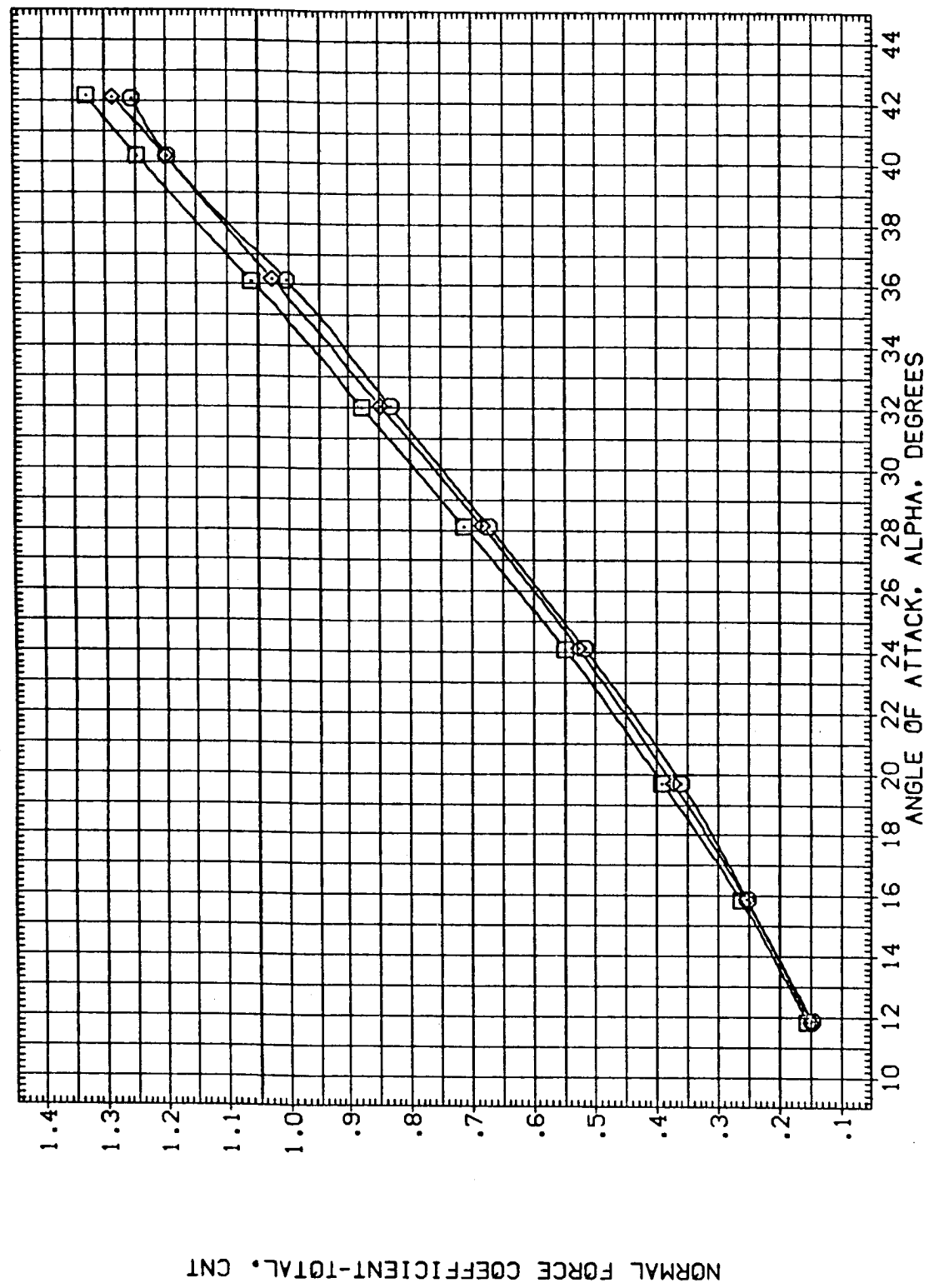


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(NEQ017)	APES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ021)	APES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EEQ022)	APES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

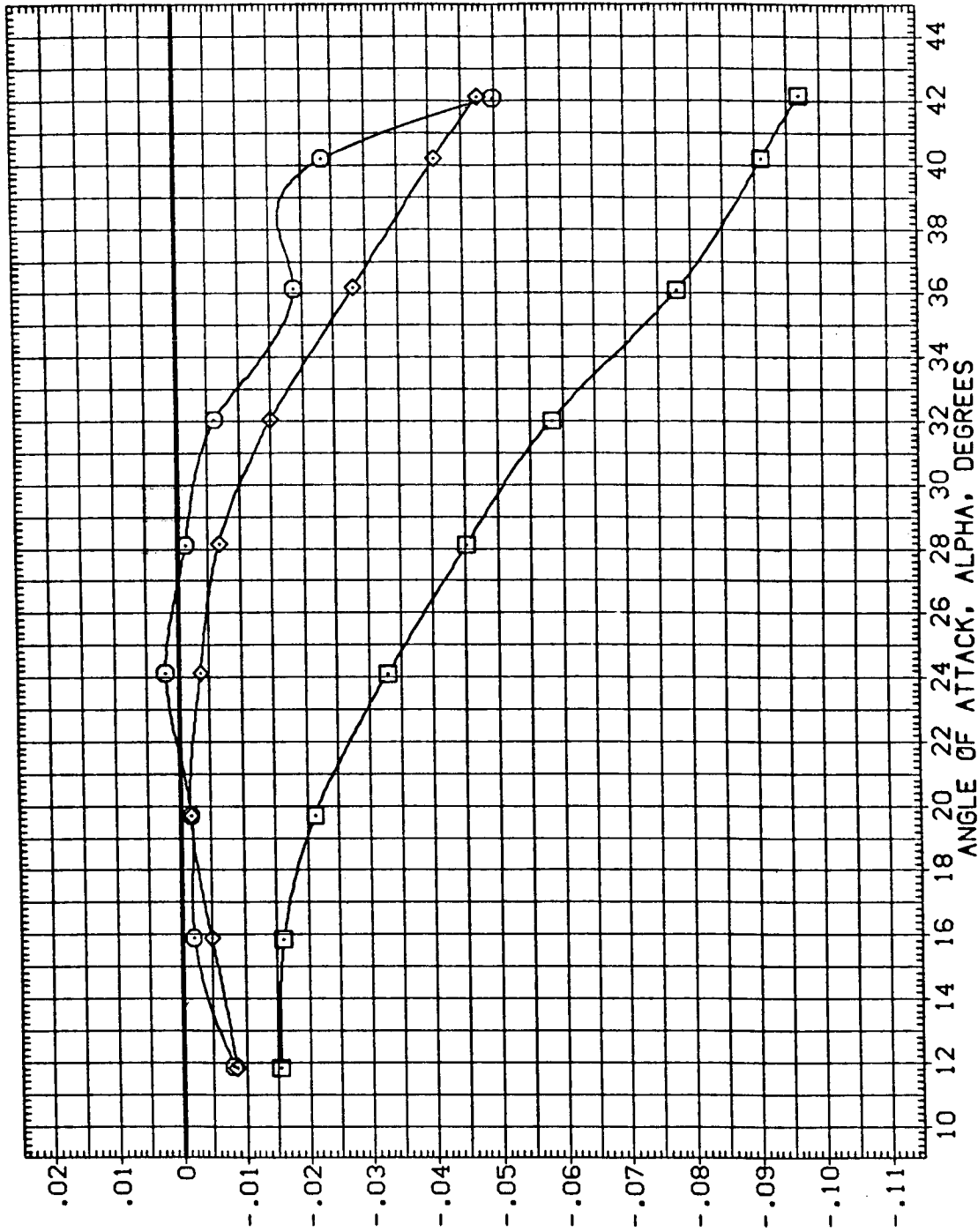


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(NE0017)	APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EE0022)	APES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

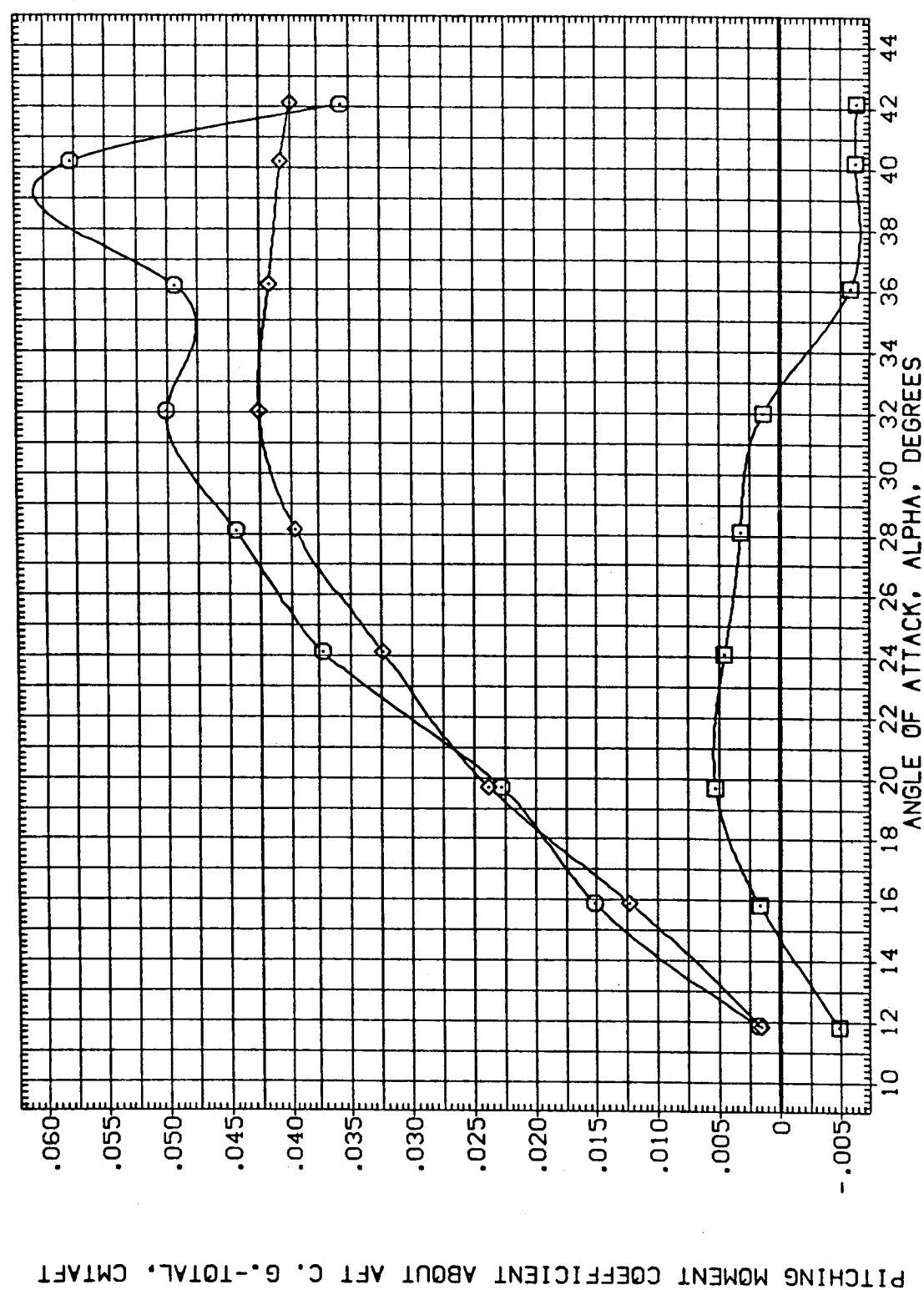


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 10.27  
 PAGE 305

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(NEQ017)	AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ021)	AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EEQ022)	AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

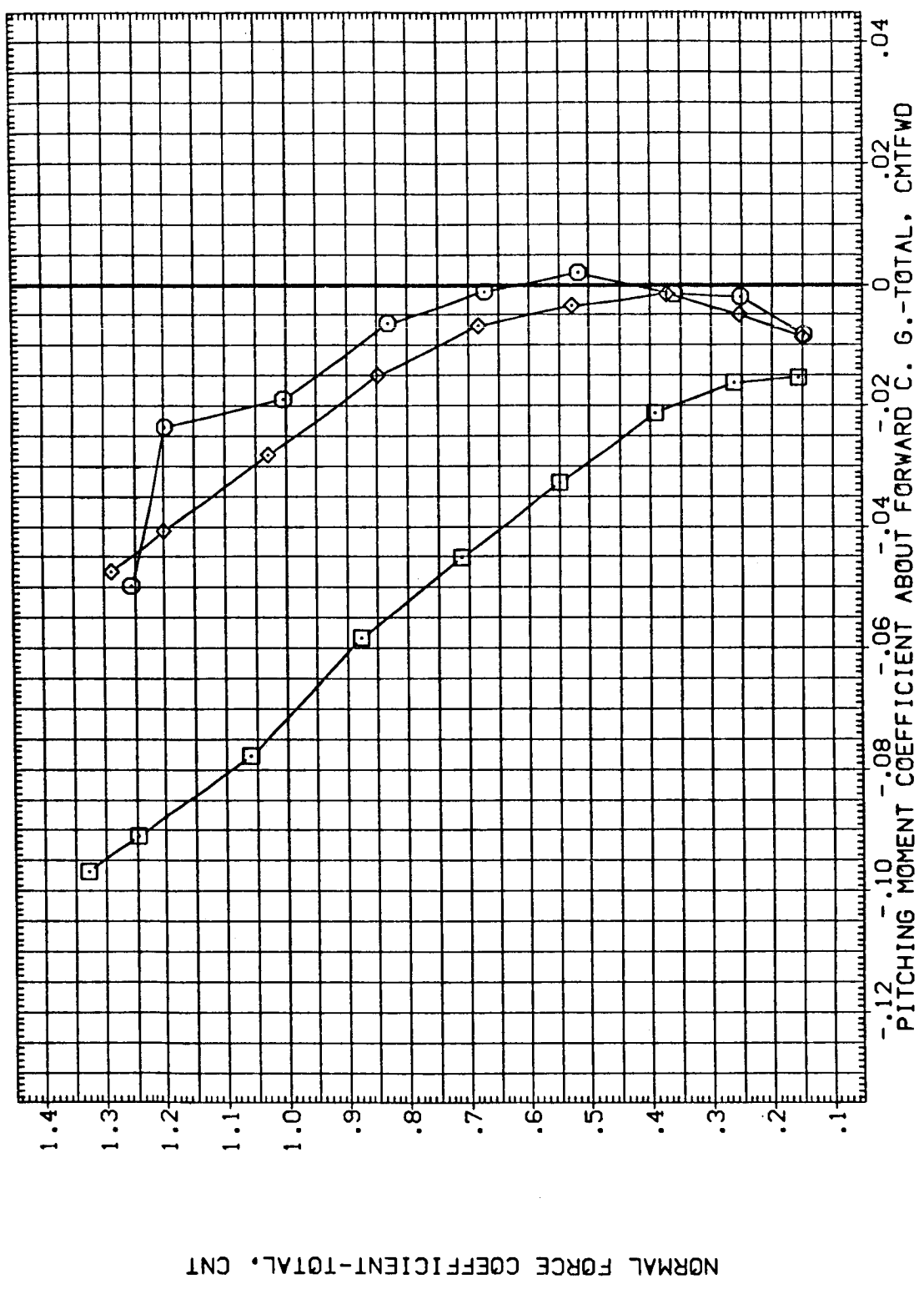


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 10.27  
 PAGE 306



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(NEG017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

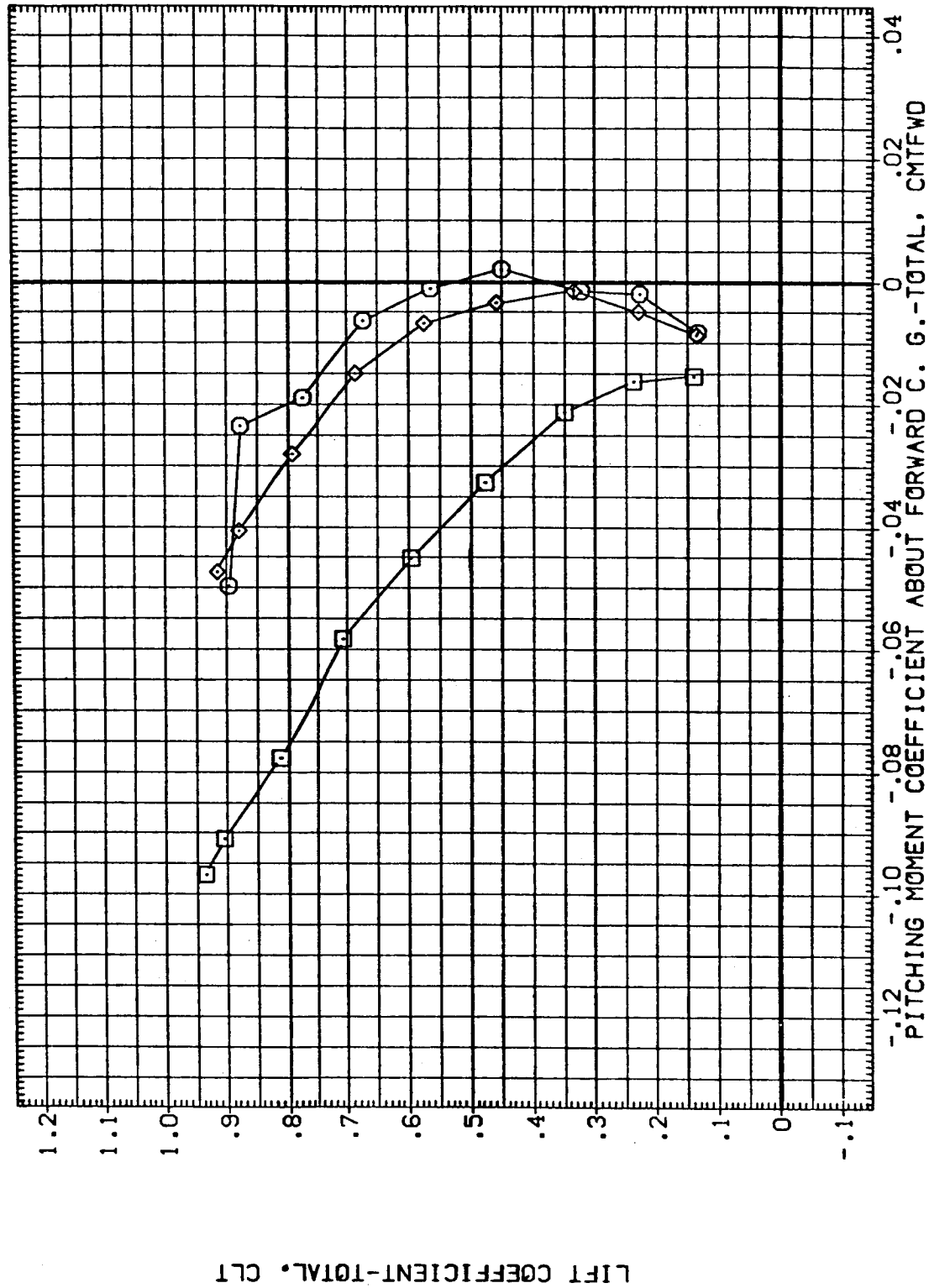


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(NE0017) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

(EE0021) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

(EE0022) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000 .000

ELEVON .000 .000 .000

BOFLAP -11.700 16.300 .000

SPOBRK 55.000 55.000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150

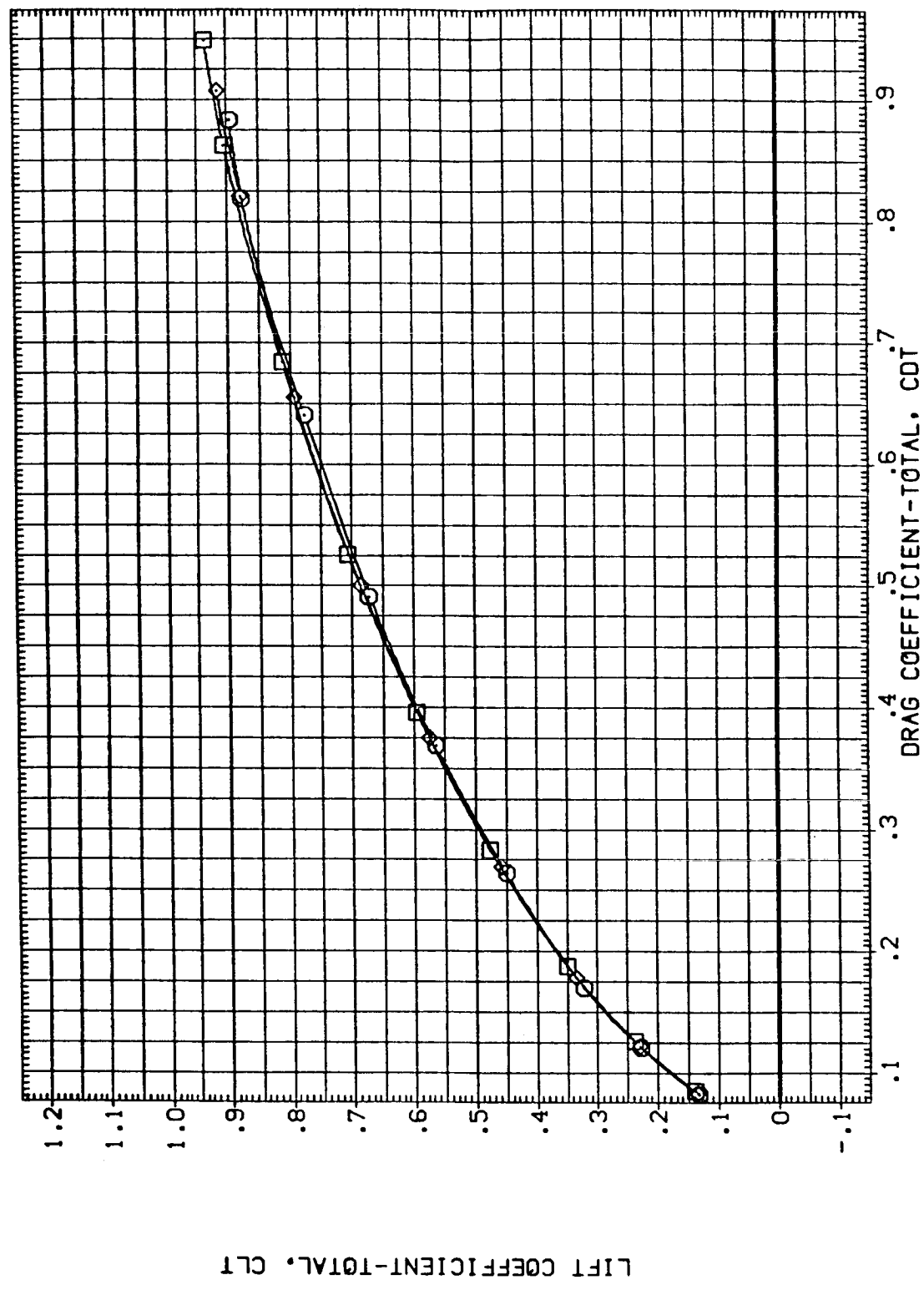


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION	
(NEG017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(EE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF	474.8000 IN.
(EE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF	936.8800 IN.
						XMRP	1076.7000 IN.X0
						YMRP	.0000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

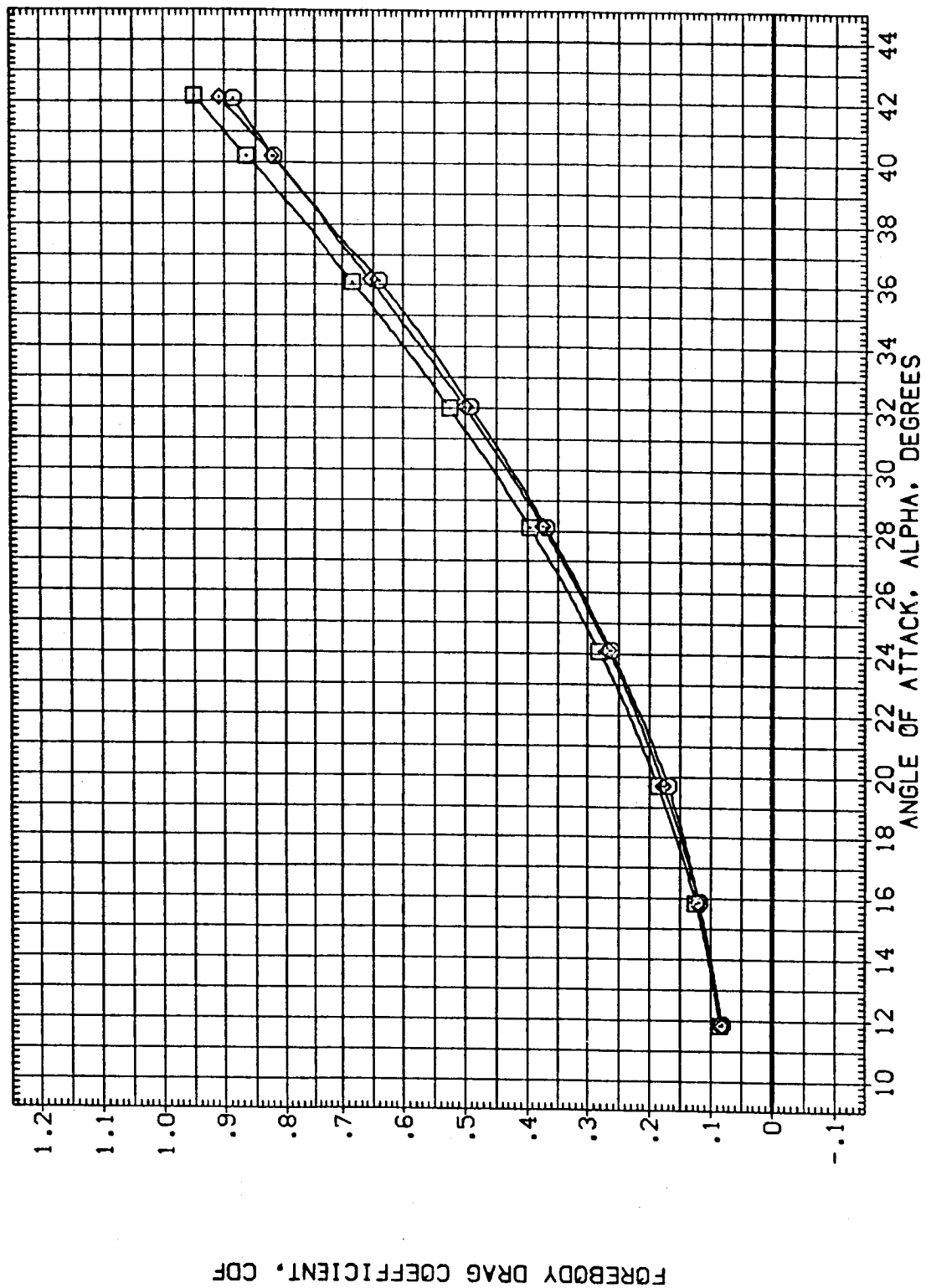


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(NE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

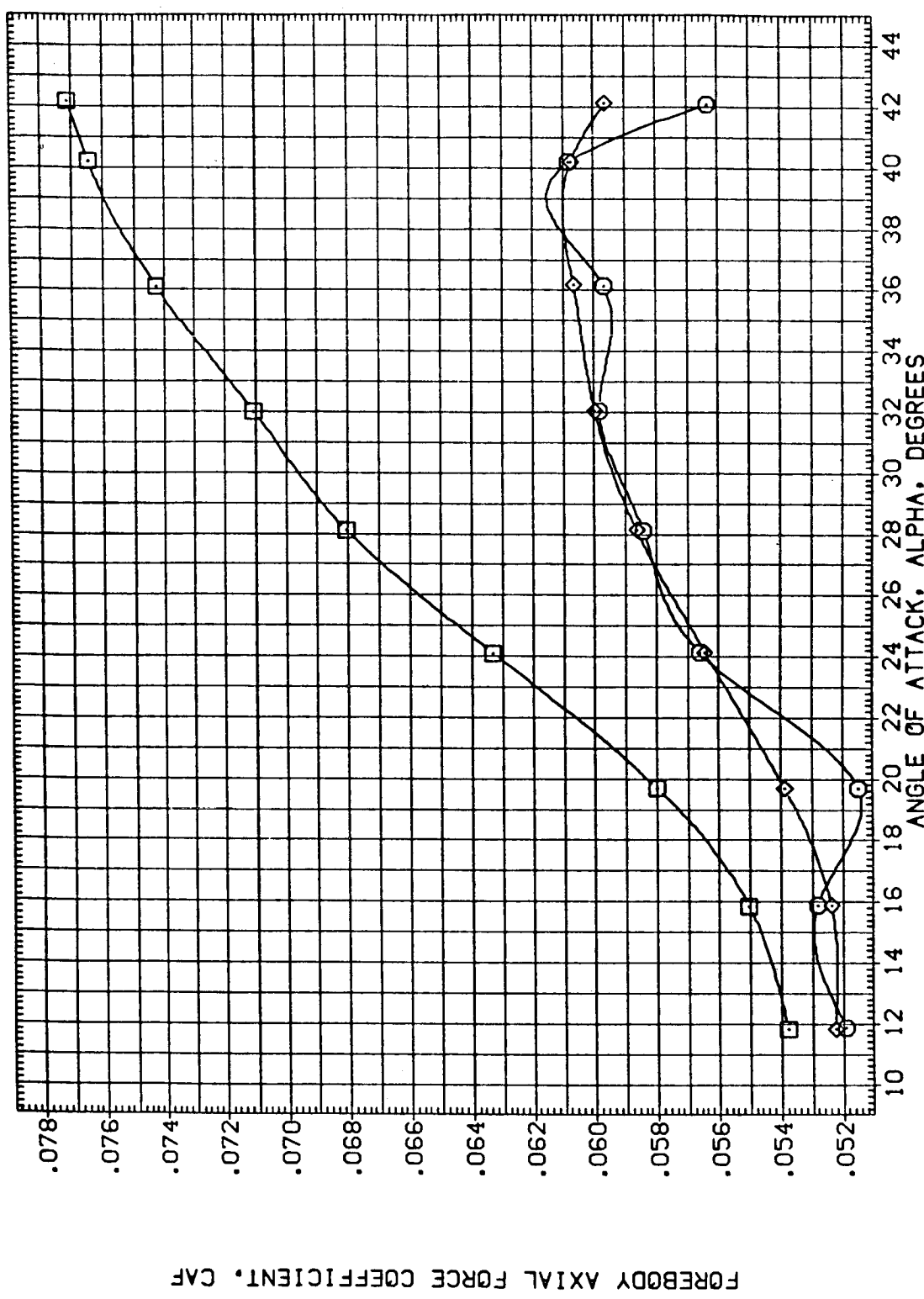


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 10.27  
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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(NE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(EE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN. X0
						YHRP 1076.7000 IN. Y0
						ZHRP .0000 IN. Z0
						SCALE .0150

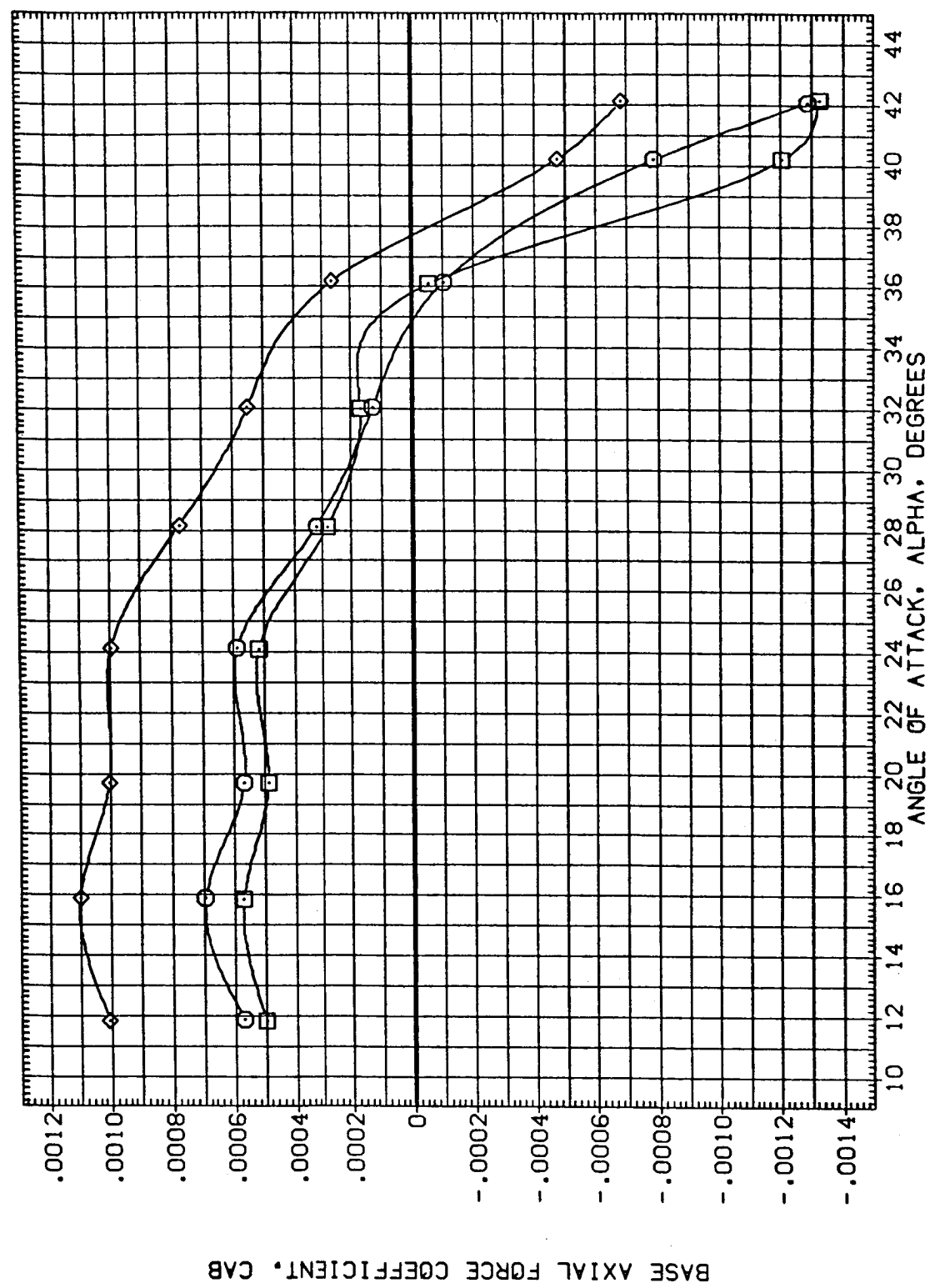


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
 (A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(LEQ017)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEQ021)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(BEQ022)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	.000	.000	55.000	BREF 936.6900 IN.
						XMRP 1076.7000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150

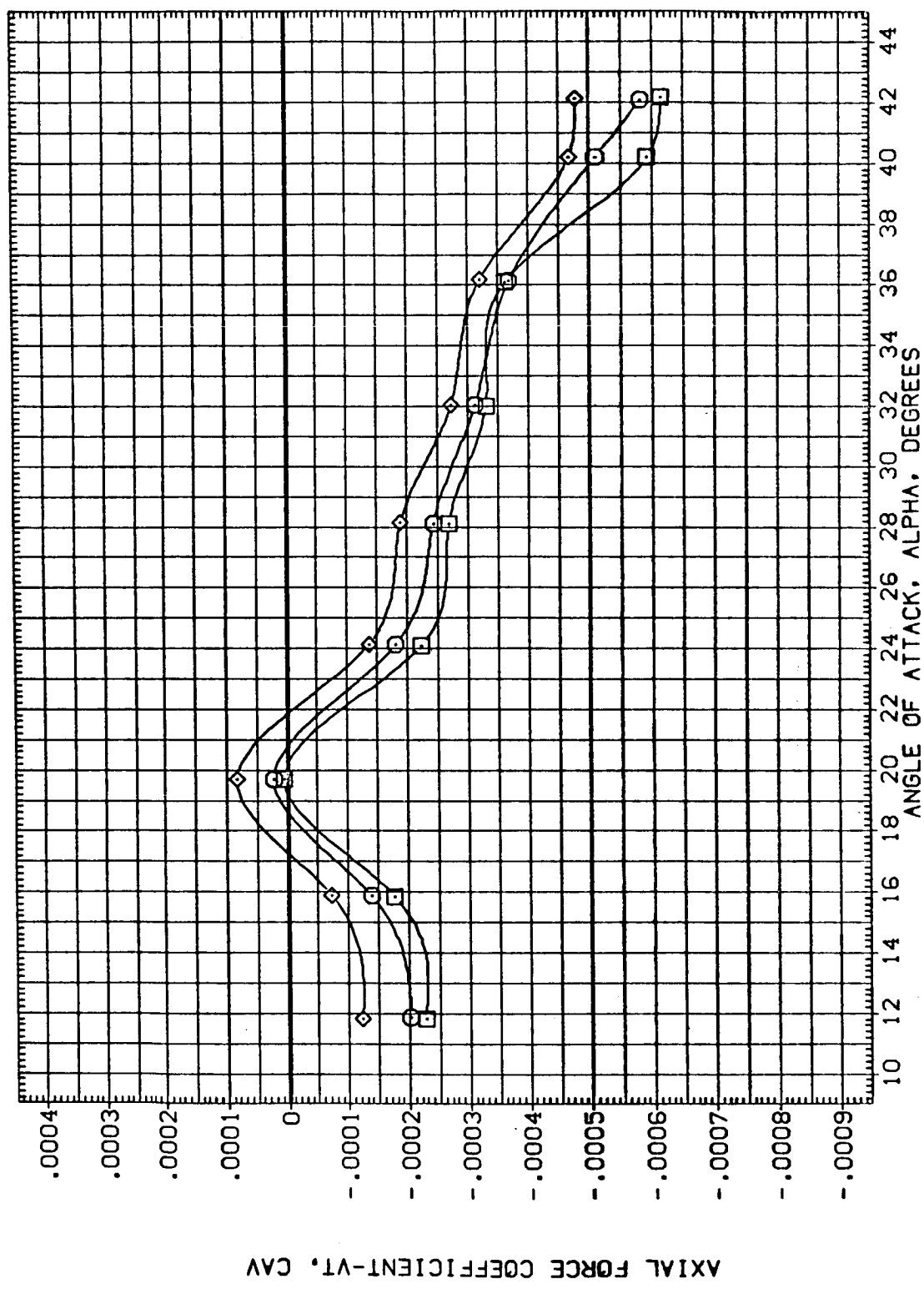


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(LEQ017)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEQ021)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(BEQ022)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

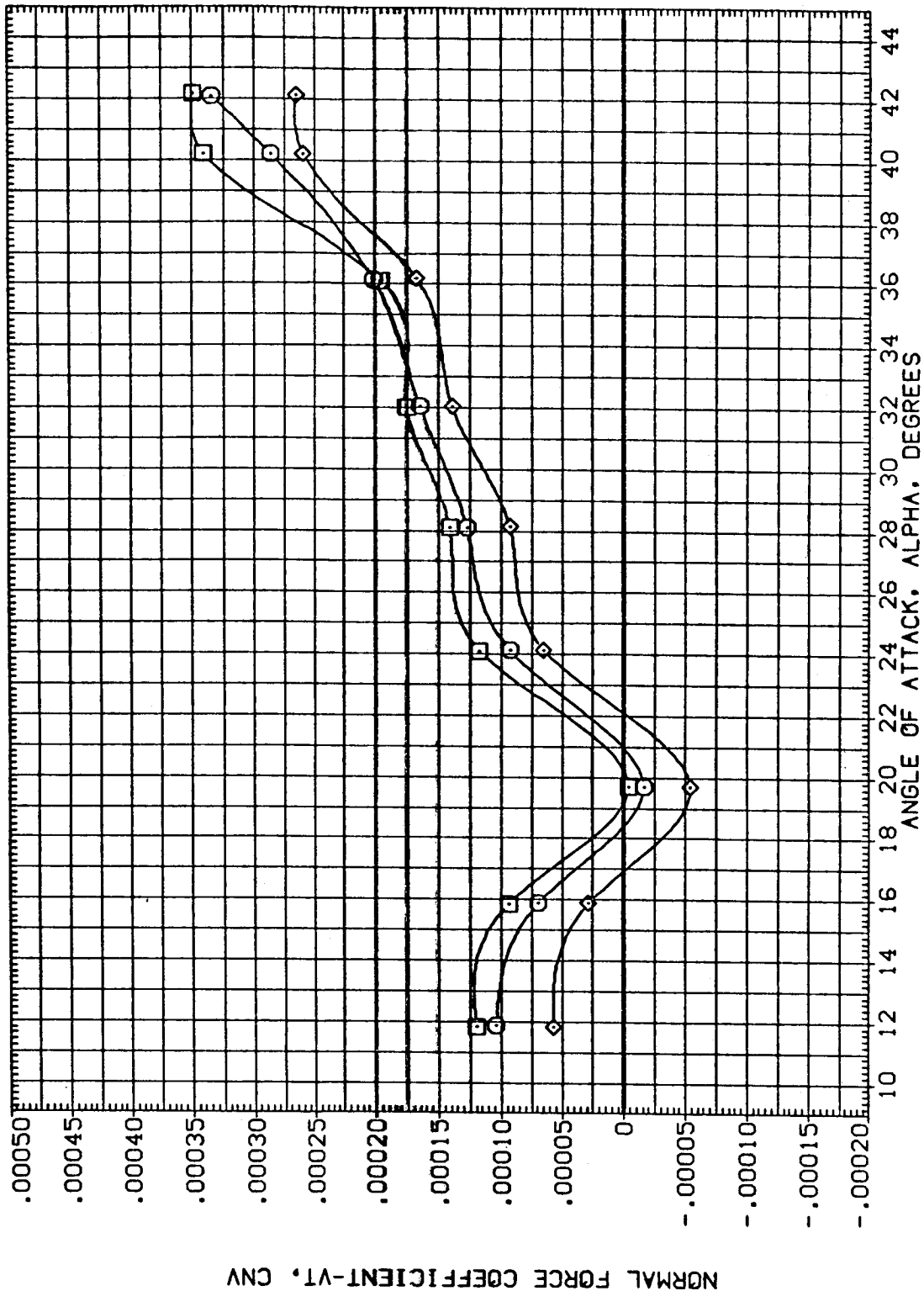


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G. -V1, CMVFW

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(LE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(BE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

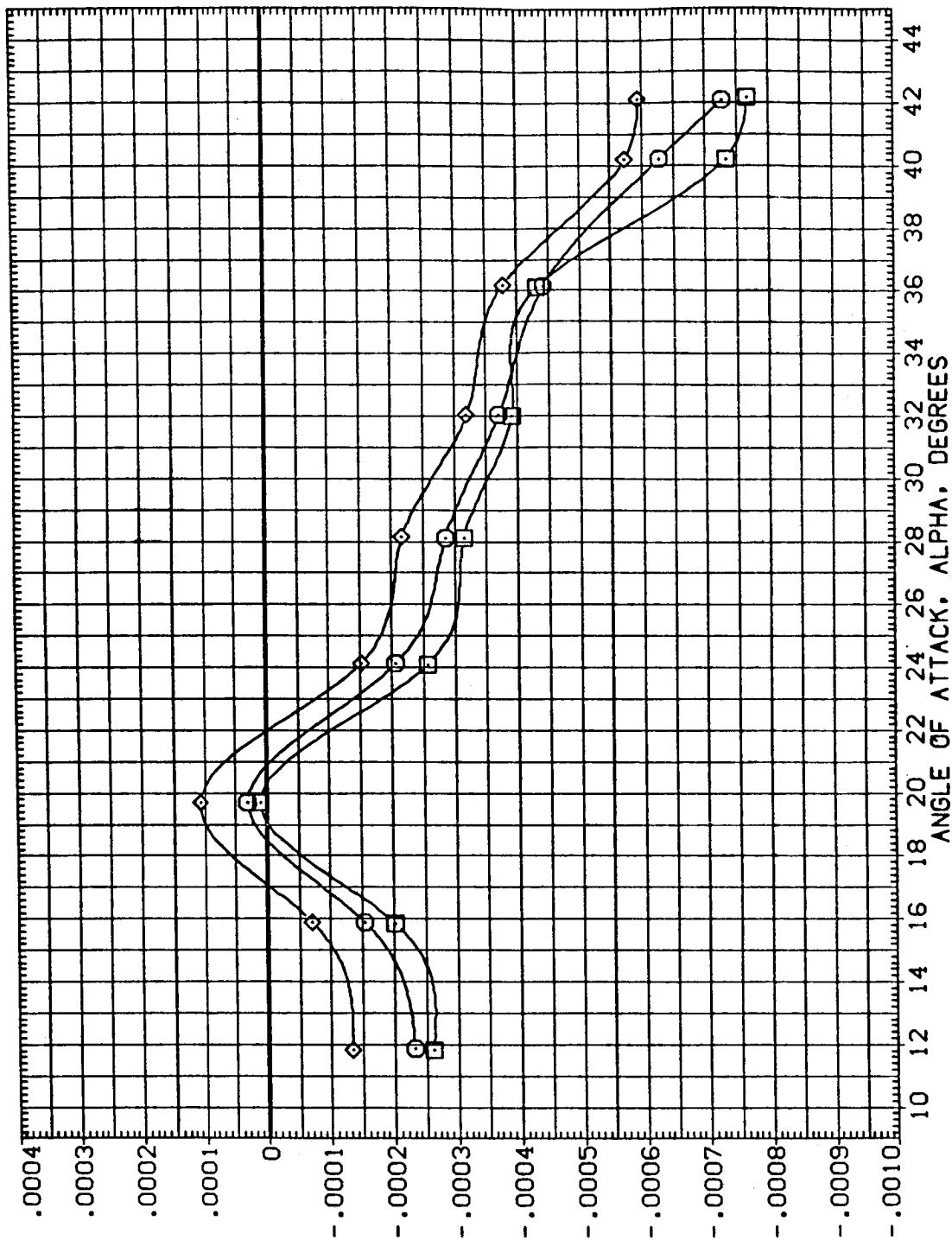


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(LE0017)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0021)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
(BE0022)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	.000	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT. CMVAFT

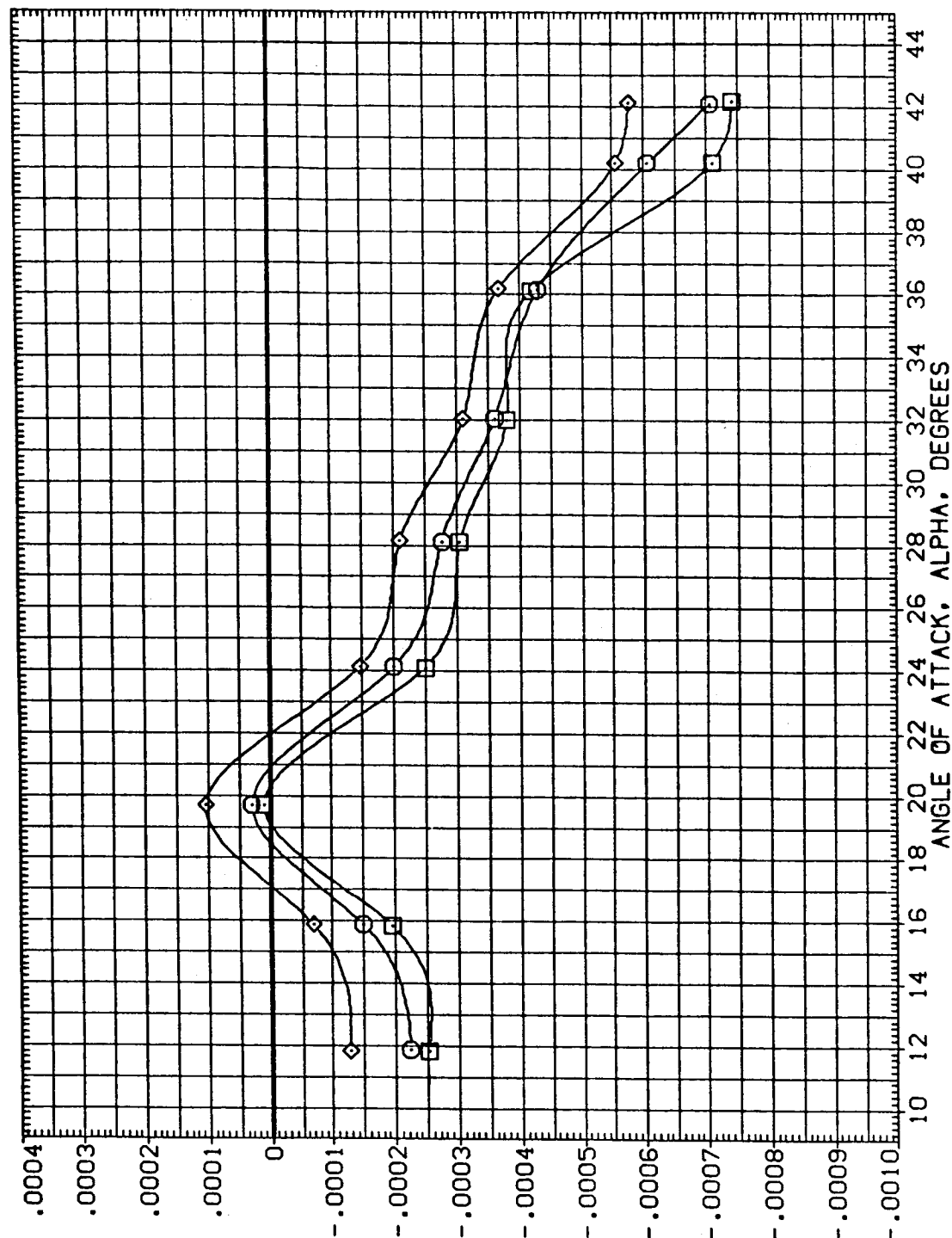


FIG. 7 LONGITUDINAL BODYFLAP EFFECTIVENESS, WITH AND WITHOUT STING AND NOZZLES.  
(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 0A98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0009)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(CE0017)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

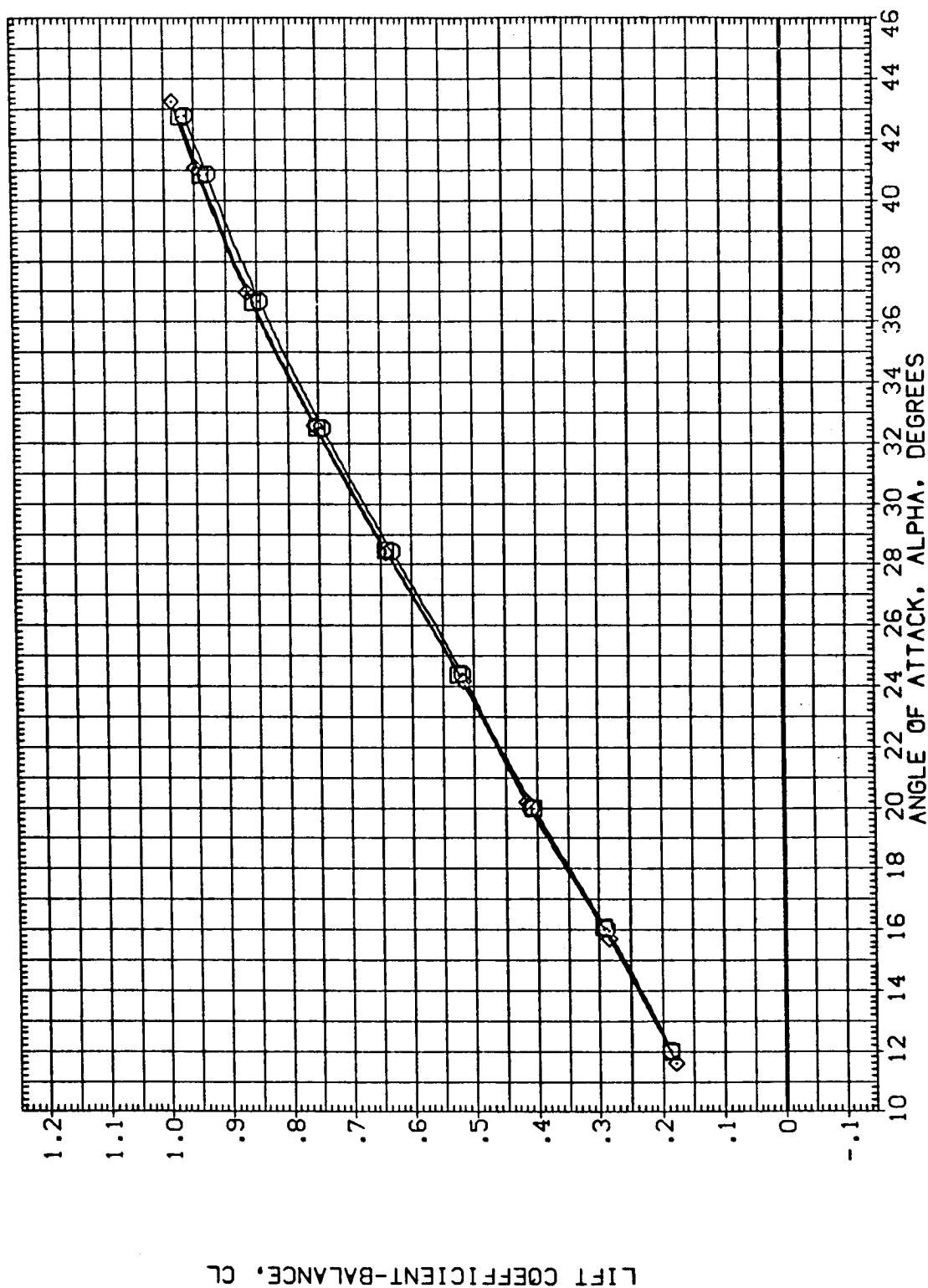


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(CE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6900 IN.
						YMRP 1076.7000 IN. X0
						ZMRP .0000 IN. Y0
						SCALE .0150

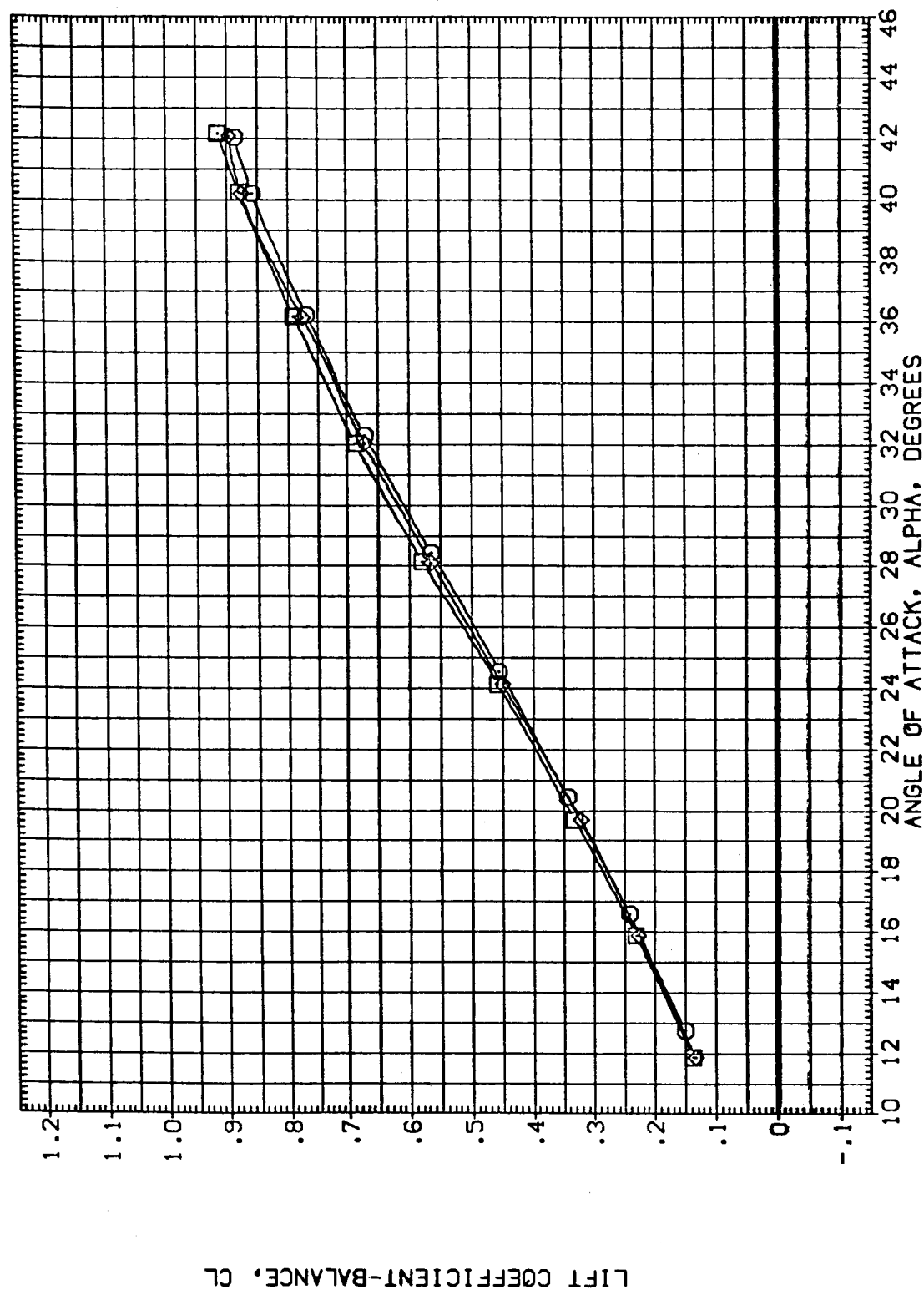


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 OA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0009)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(CE0017)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

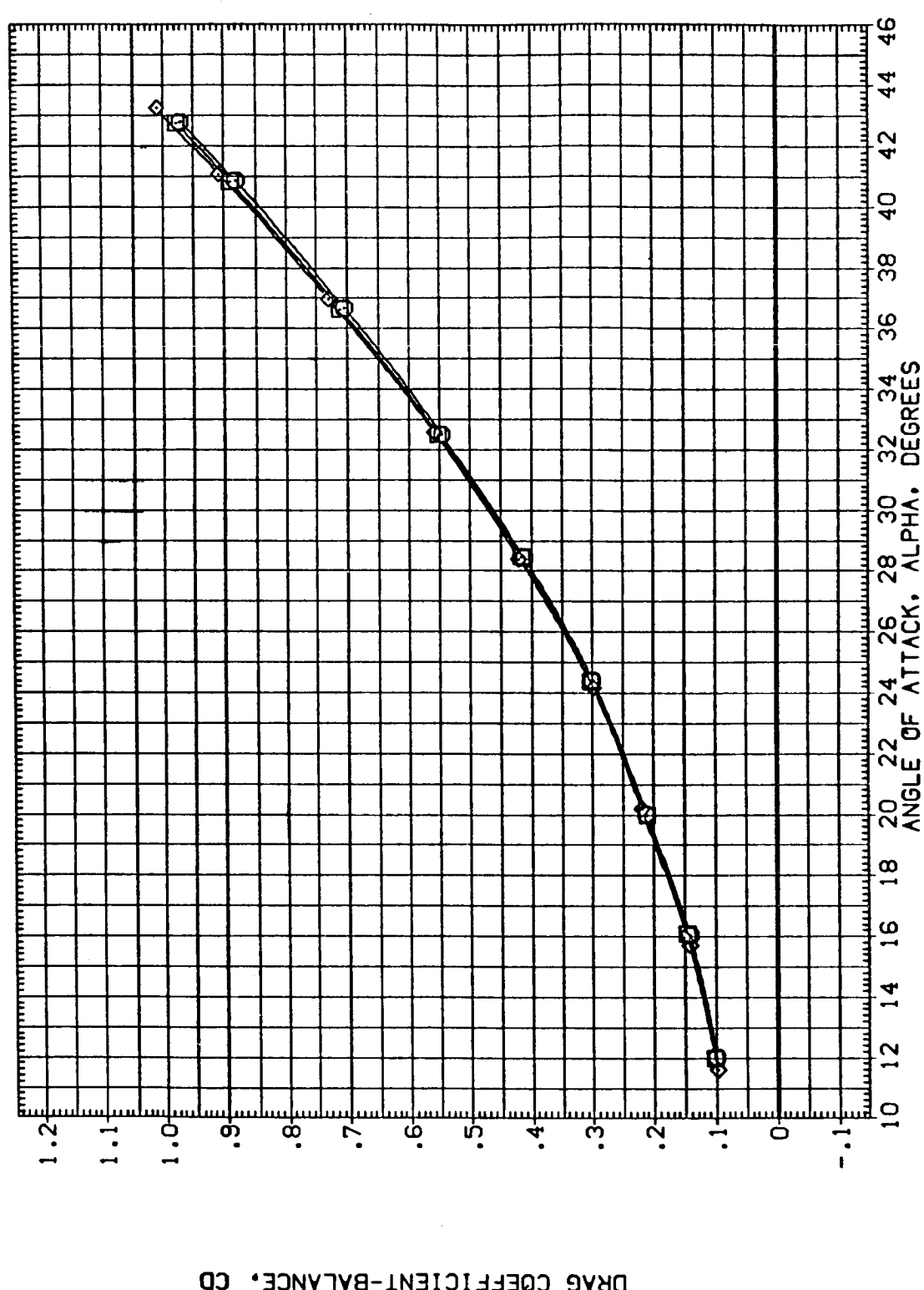


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

( $\alpha$ )MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 OA98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0009)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(CE0017)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

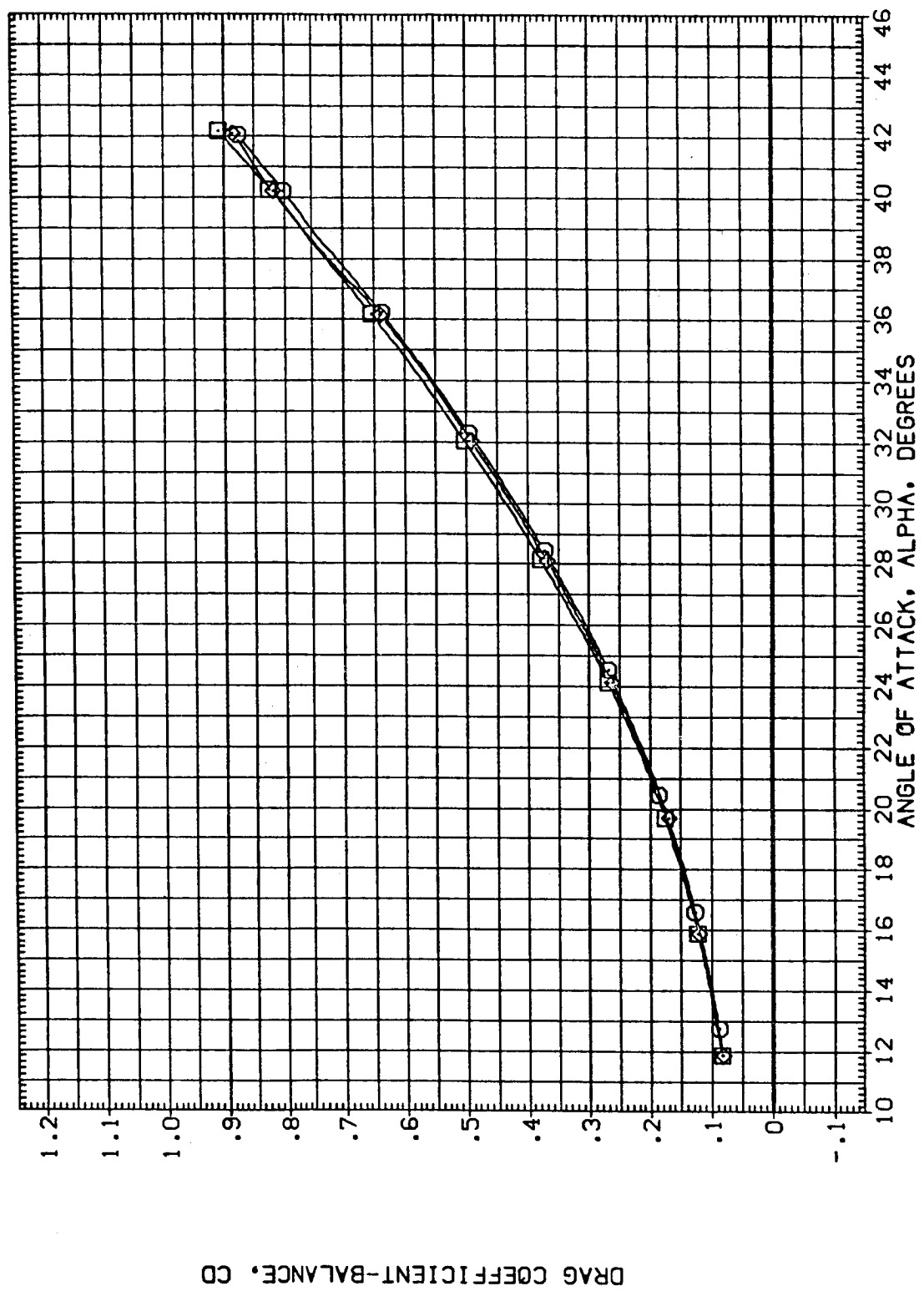


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL: (CE0001) (CE0008) (CE0017)

CONFIGURATION DESCRIPTION: AMES 3.5-190 0A98 (011-M7+M14) AMES 3.5-190 0A98 (011-M7+M14-N24) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA: .000 .000 .000

ELEVON: .000 .000 .000

BOFLAP: -11.700 -11.700 -11.700

SPOBRK: 55.000 55.000 55.000

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP .0000 IN. ZMRP 375.0000 IN. SCALE .0150

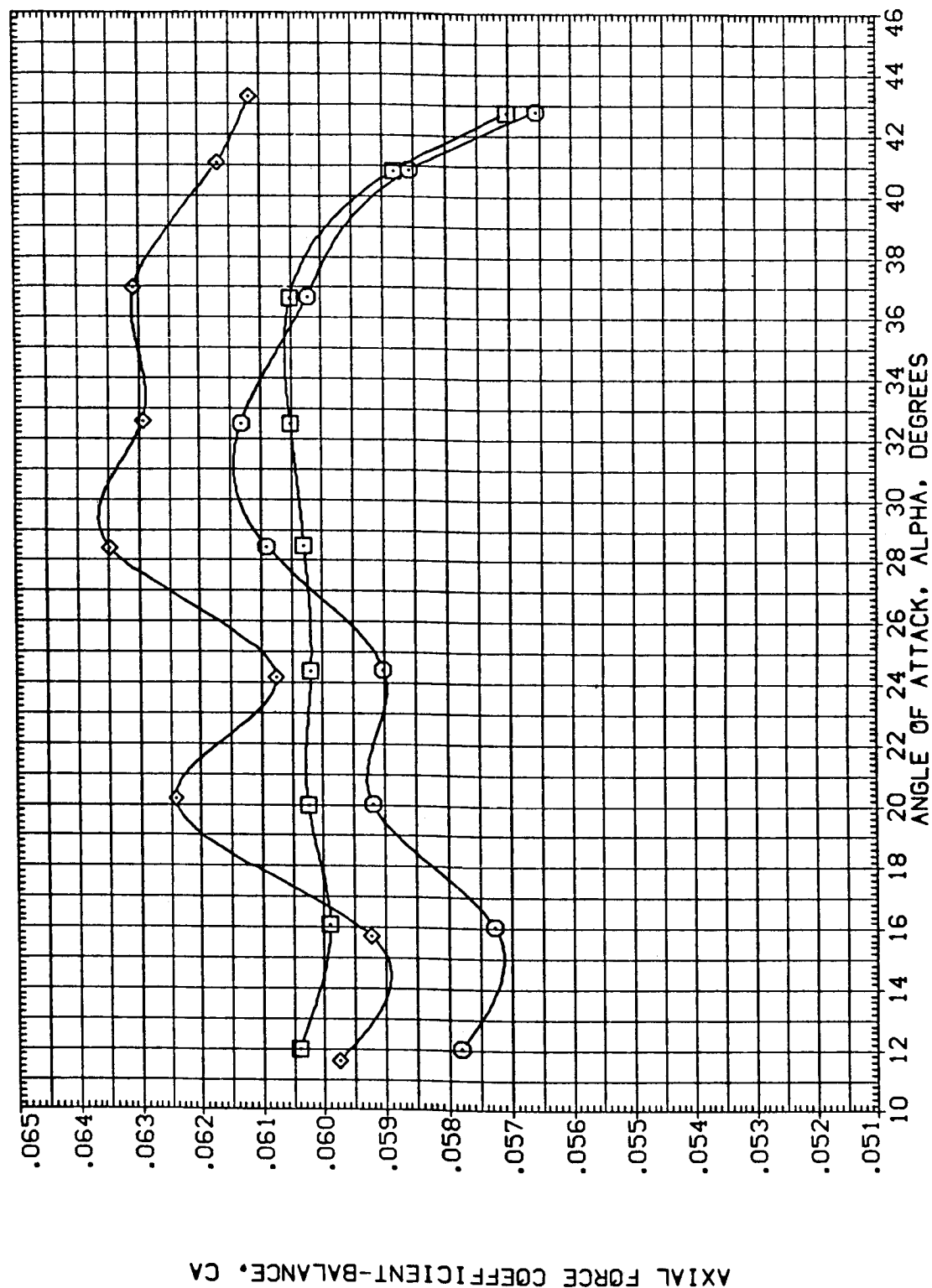


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(CE0001)	AMES 3.5-190 DASH (011-M7+M14)	.000	.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(CE0009)	AMES 3.5-190 DASH (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF	474.8000 IN.
(CE0017)	AMES 3.5-190 DASH (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF	936.6800 IN.XD
						XMRP	1076.7000 IN.YD
						YMRP	.0000 IN.ZD
						ZMRP	375.0000 IN.ZD
						SCALE	.0150

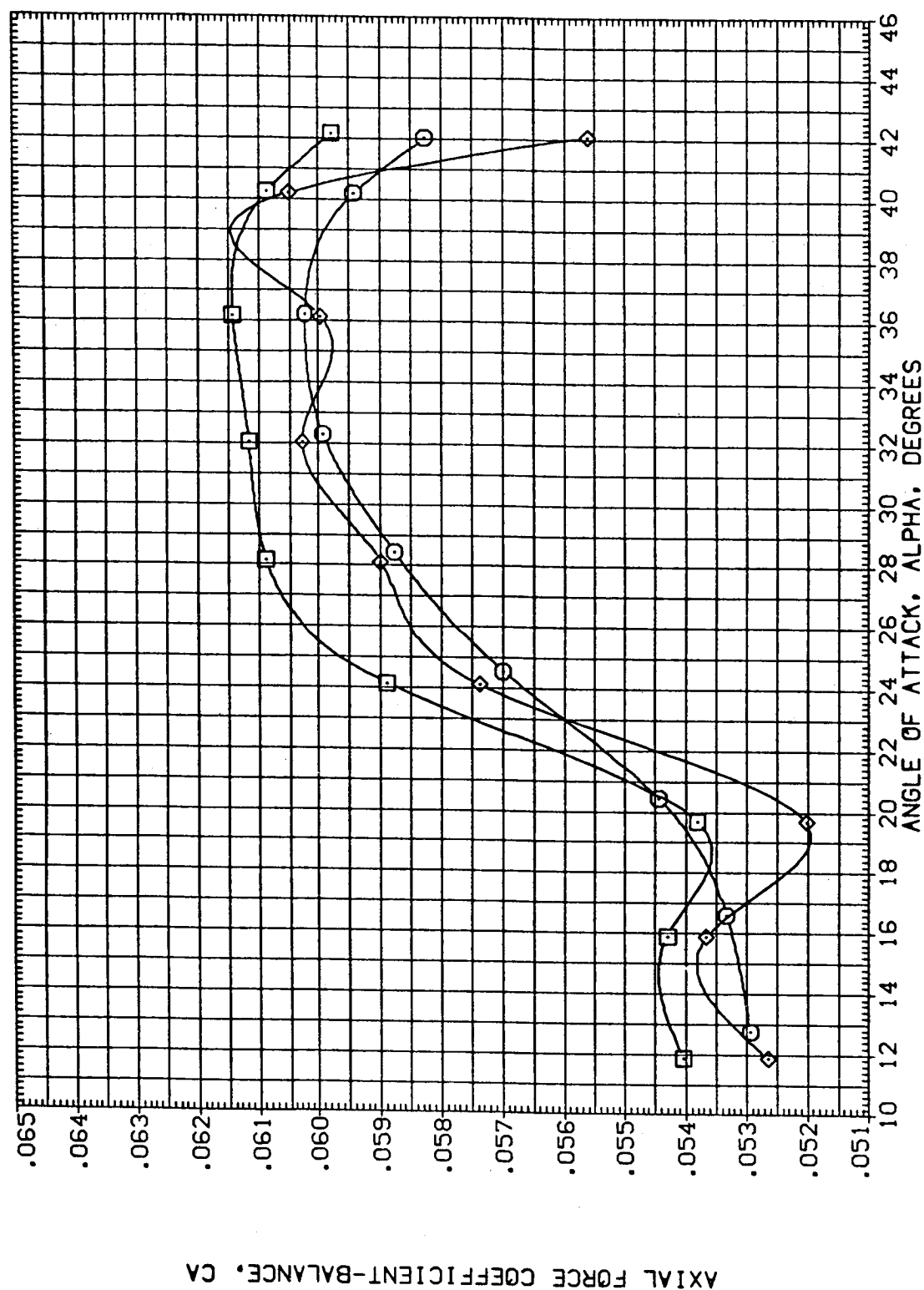
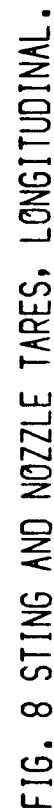


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

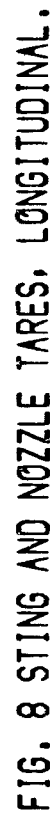
(B)MACH = 10.27

REFERENCE INFORMATION		SG, FT
SREF	2690.0000	IN.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMPP	1076.7000	IN.
YMPP	.0000	IN.
ZMPP	375.0000	IN.
SCALE	.0150	IN.



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PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMWD



PAGE

DATA SET SYMBOL: (CE0001), (CE0009), (CE0017)

CONFIGURATION DESCRIPTION: AMES 3.5-190 D/98 (011-M7+M14), AMES 3.5-190 D/98 (011-M7+M14-N24), AMES 3.5-190 D/98 (011-M7+M14-N24+DUPHY STING)

BETA: .000, .000, .000

ELEVON: .000, .000, .000

BOFLAP: -11.700, -11.700, -11.700

SPOBRK: 55.000, 55.000, 55.000

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT., LREF 474.8000 IN., BREF 936.6800 IN., XMRP 1076.7000 IN., YMRP .0000 IN., ZMRP 375.0000 IN., YG IN., YG IN., ZG IN., YG IN., YG IN., ZG IN., SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

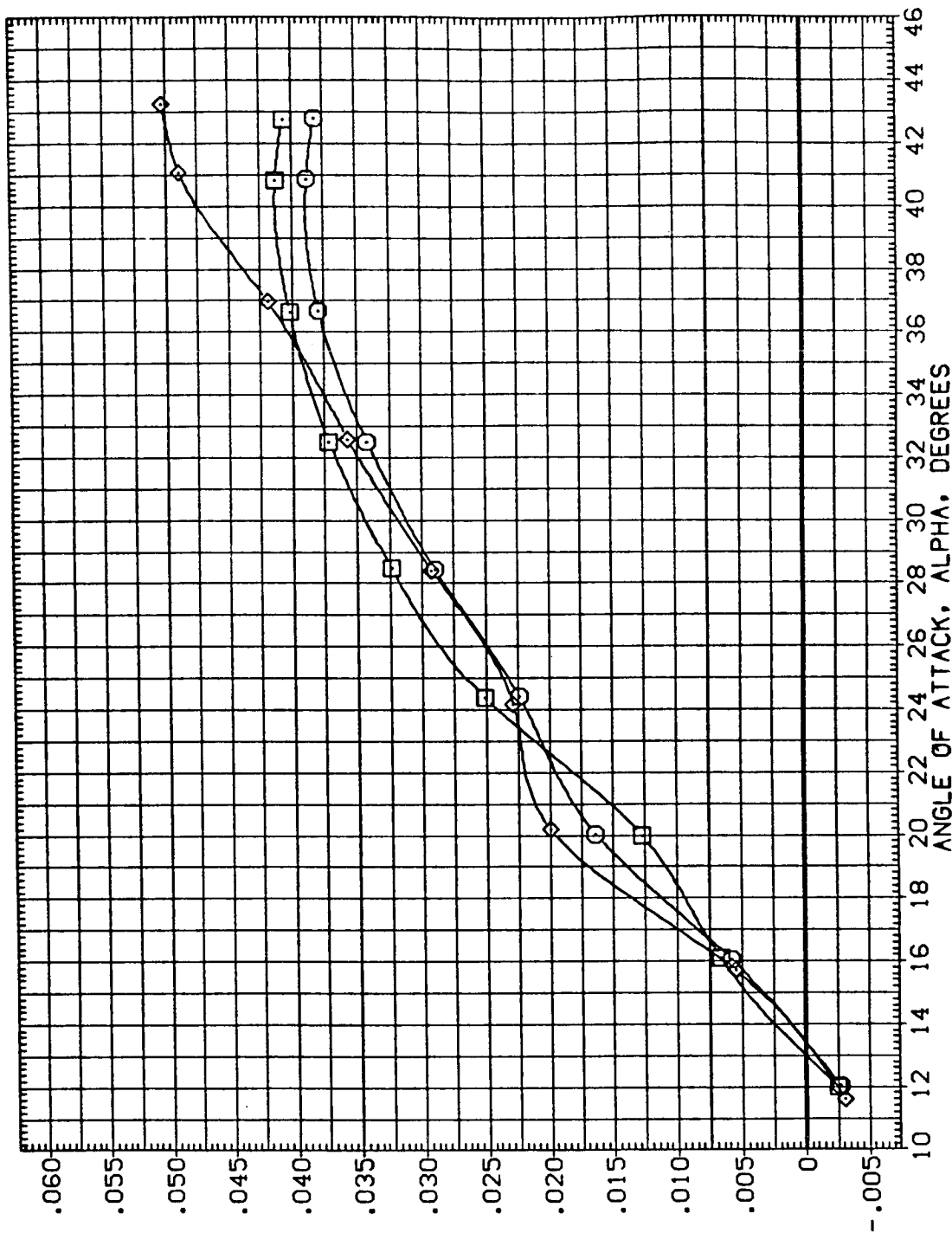


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0001)	AVES 3.5-190 0A98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0009)	AVES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(CE0017)	AVES 3.5-190 0A98 (011-M7-M14-N24+JUNNY STING)	.000	.000	-11.700	55.000	BREF 936.8800 IN. X0
						YMRP 1076.7000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

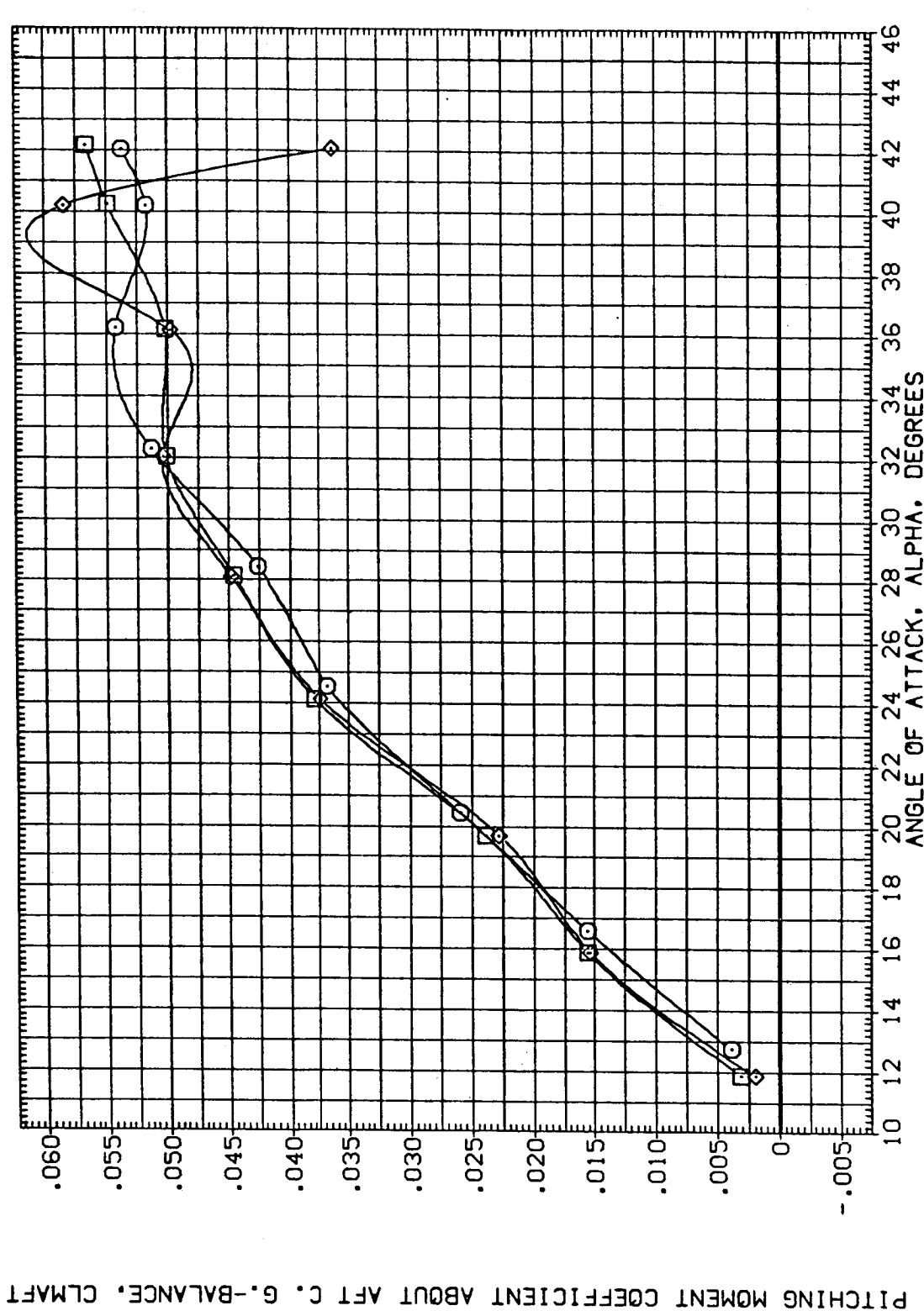


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(CE0001)  
(CE0009)  
(CE0017)

CONFIGURATION DESCRIPTION  
APES 3.5-190 0A98 (011-M7-M14)  
APES 3.5-190 0A98 (011-M7-M14-N24)  
APES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
.000  
.000  
.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPDRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

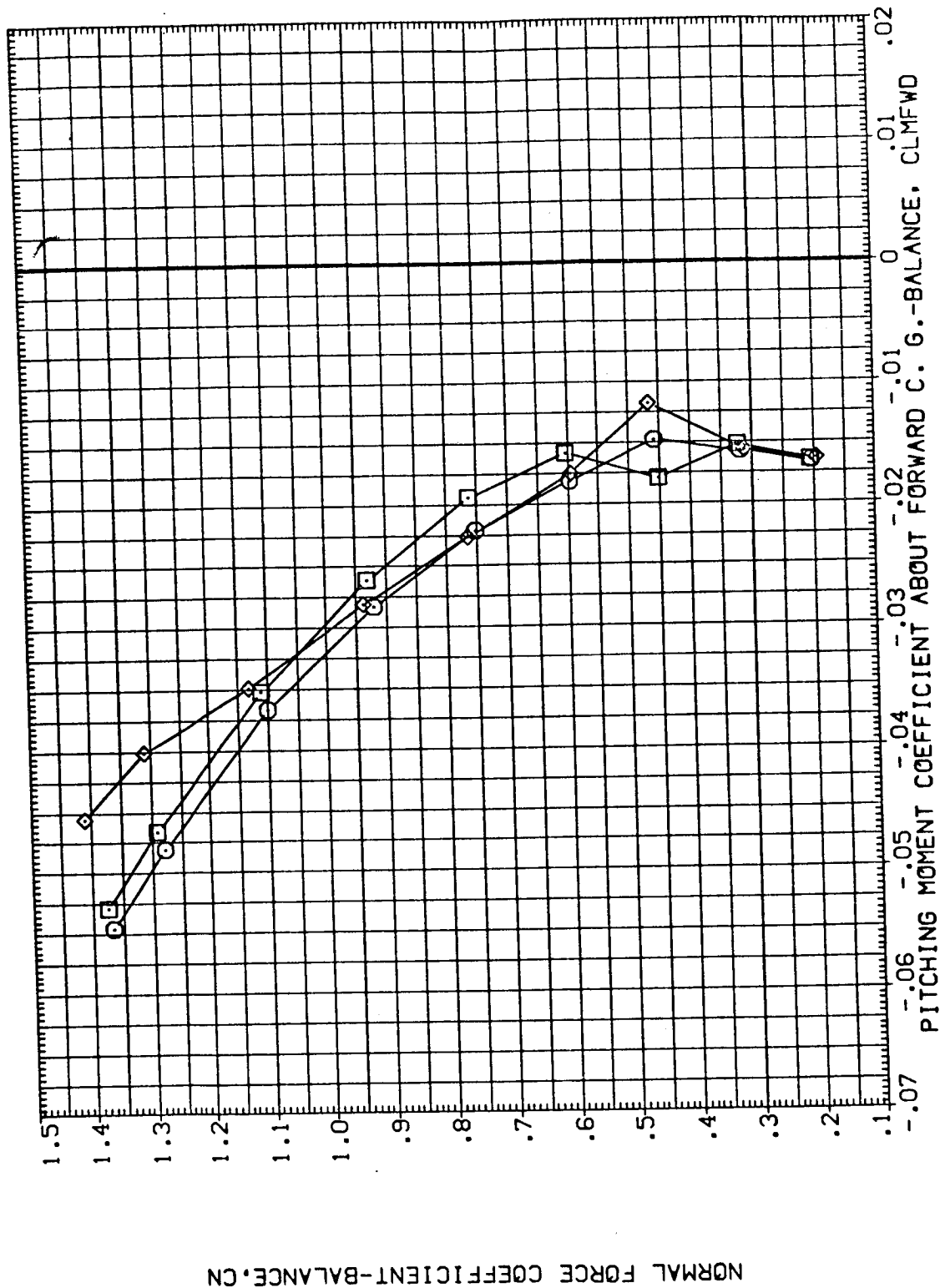


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AVES 3.5-190 0A98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0009)	AVES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(CE0017)	AVES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

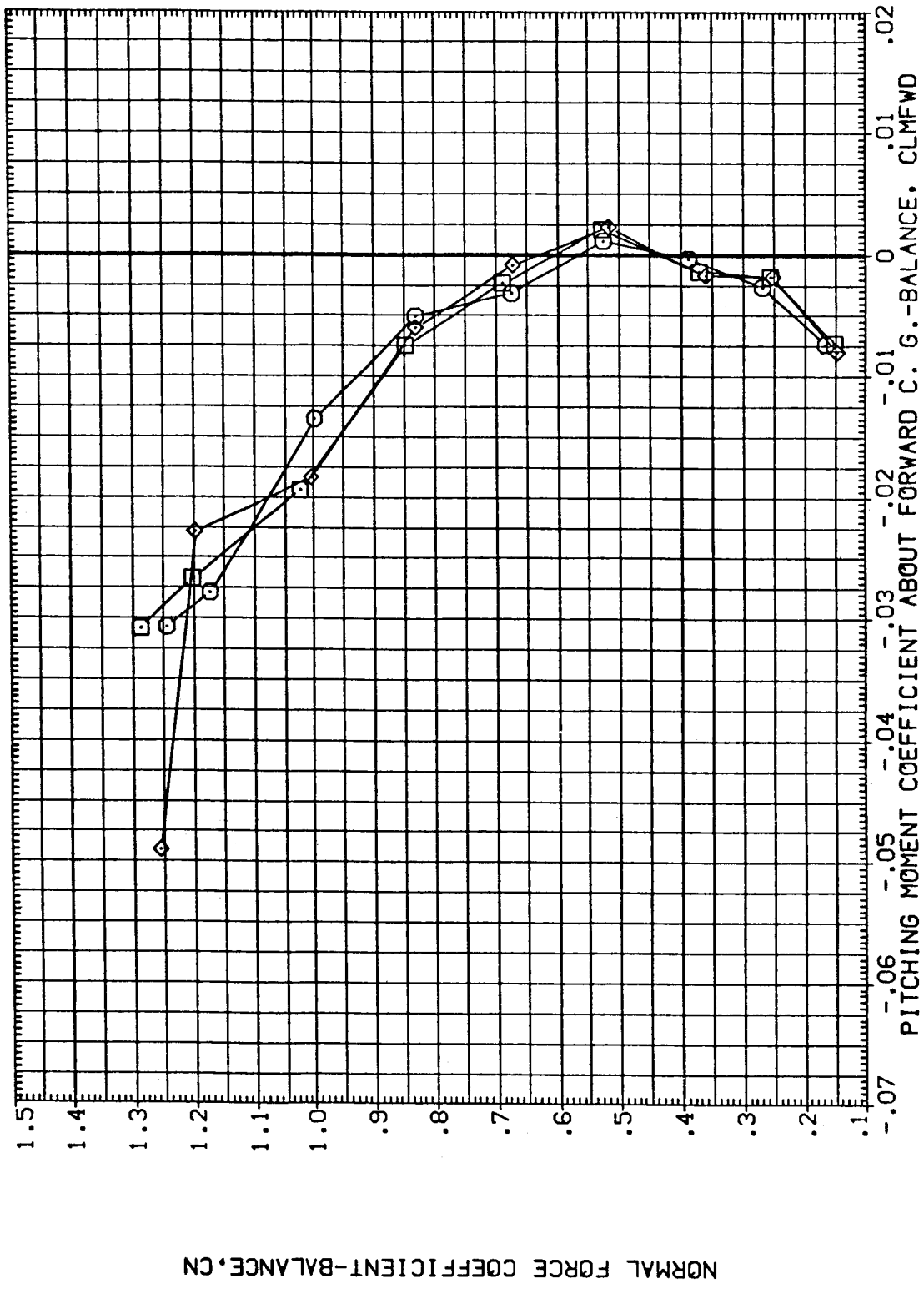


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(CE0001)  
(CE0005)  
(CE0017)

CONFIGURATION DESCRIPTION  
AVES 3.5-190 OA98 (011-M7-H14)  
AVES 3.5-190 OA98 (011-M7-H14-N24)  
AVES 3.5-190 OA98 (011-M7-H14-N24-DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
.000  
.000  
.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
95.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.X0  
XMRP 1076.7000 IN.Y0  
YMRP .0000 IN.Z0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

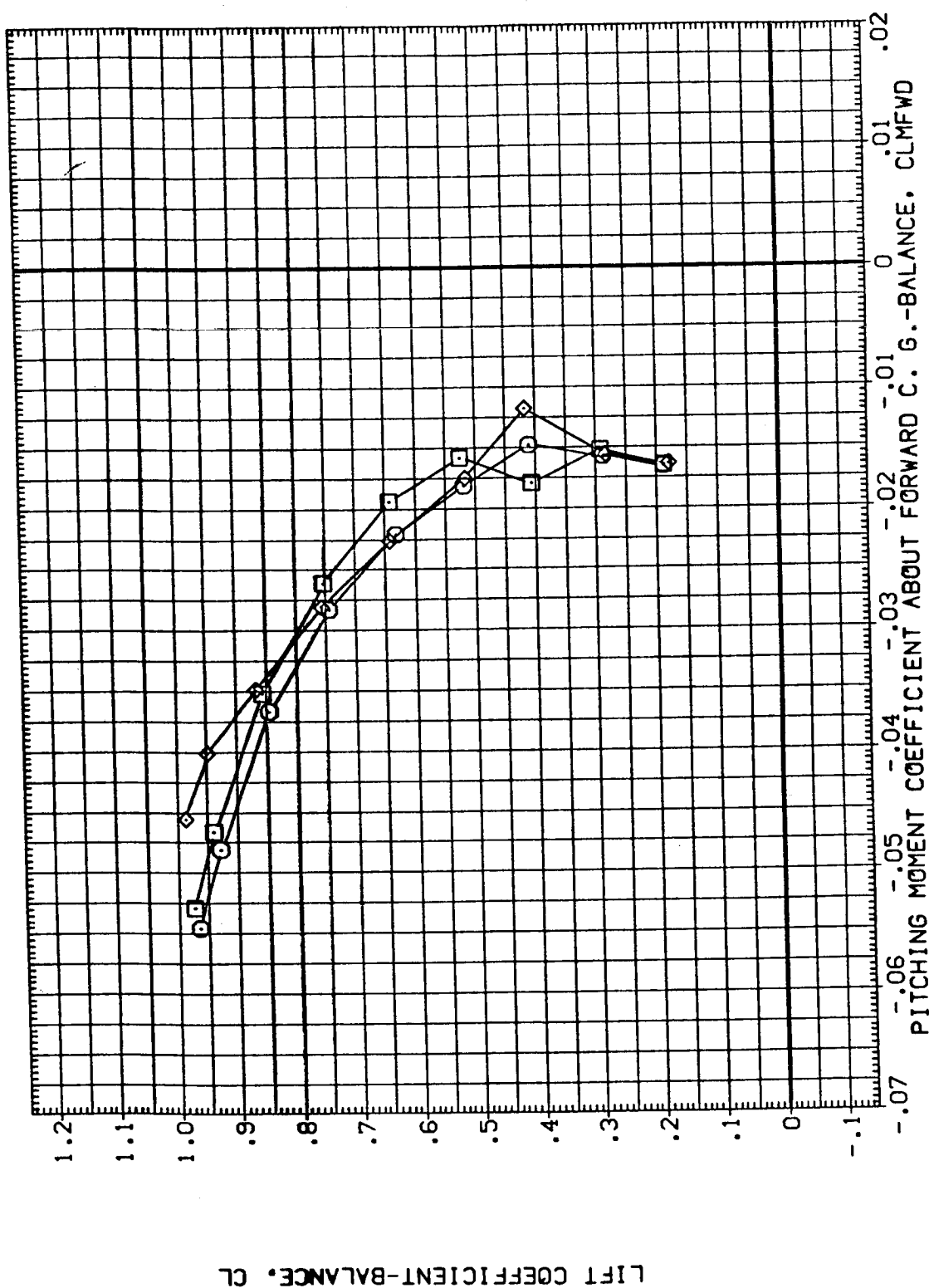


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL      CONFIGURATION DESCRIPTION

(CE0001)      AVES 3.5-190 DAS8 (011-M7-M14)

(CE0009)      AVES 3.5-190 DAS8 (011-M7-M14-N24)

(CE0017)      AVES 3.5-190 DAS8 (011-M7-M14-N24+DUMMY STING)

BETA      ELEVON      BOFLAP      SPOBRK

.000      .000      -11.700      55.000

.000      .000      -11.700      55.000

.000      .000      -11.700      55.000

REFERENCE INFORMATION

SREF      2690.0000      SQ.FT.

LREF      474.8000      IN.

BREF      936.8800      IN.

XMRP      1076.7000      IN.

YMRP      .0000      IN.

ZMRP      375.0000      IN.

SCALE      .0150

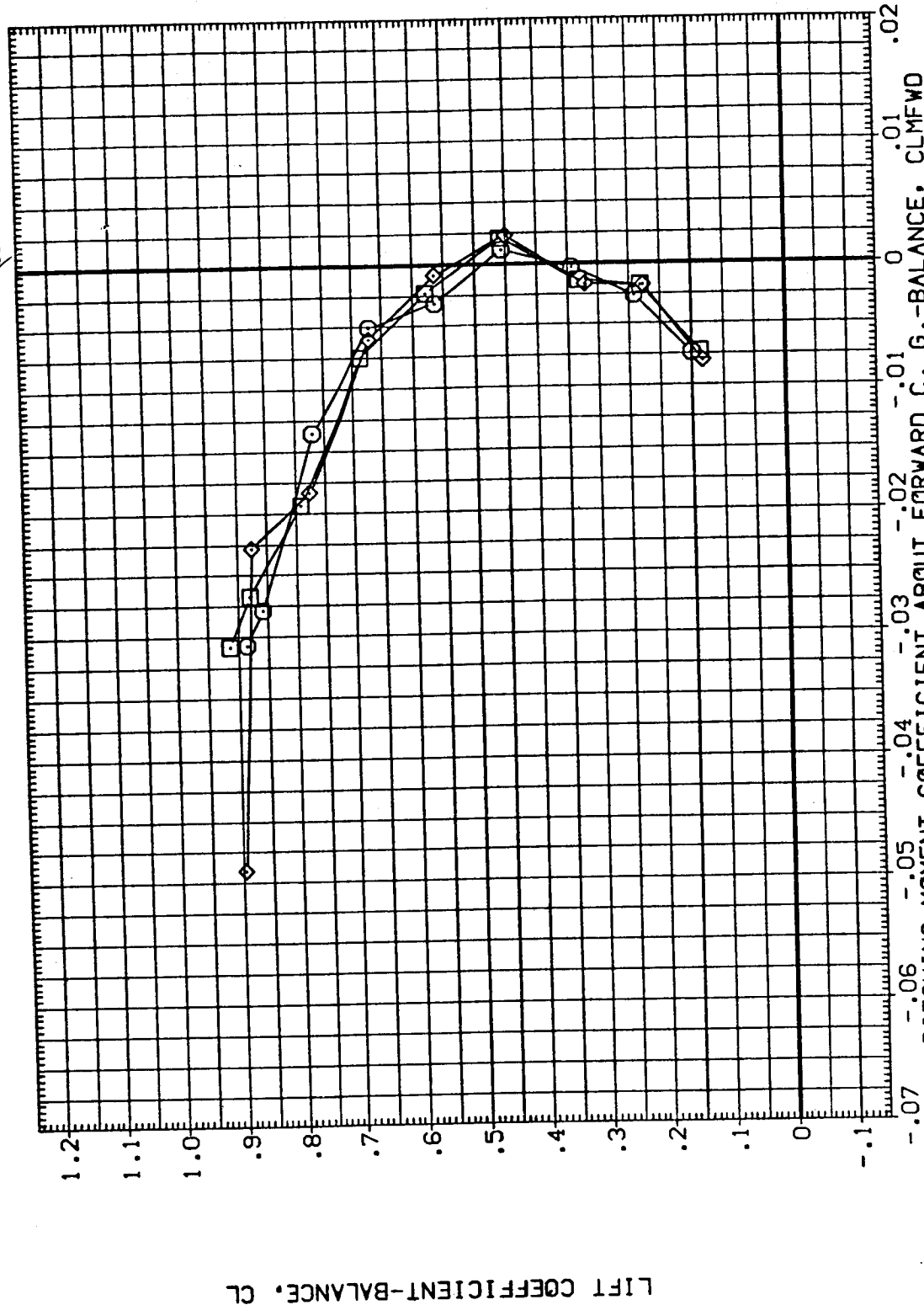
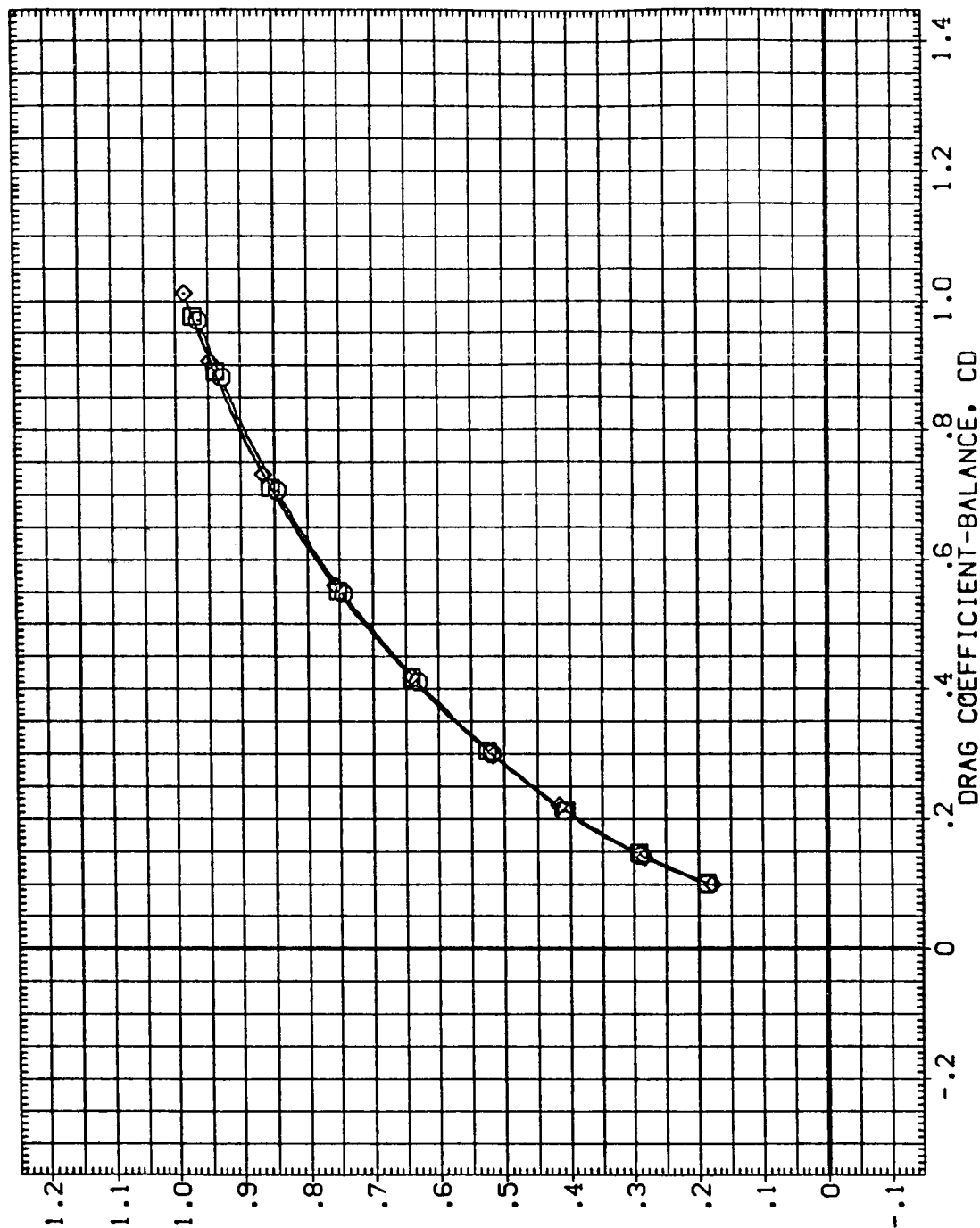


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (CE0001)    AMES 3.5-190 OA98 (011-M7+M14)  
 (CE0009)    AMES 3.5-190 OA98 (011-M7+M14-N24)  
 (CE0017)    AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA    ELEVON    BOFLAP    SPOBRK    REFERENCE INFORMATION  
 .000    .000    -11.700    55.000    SREF    2690.0000    SQ.FT.  
 .000    .000    -11.700    55.000    LREF    474.8000    IN.  
 .000    .000    -11.700    55.000    BREF    936.6800    IN.  
       XMRP    1076.7000    IN.X0  
       YMRP    .0000    IN.Y0  
       ZMRP    375.0000    IN.Z0  
       SCALE    .0150



LIFT COEFFICIENT-BALANCE, CL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(CE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

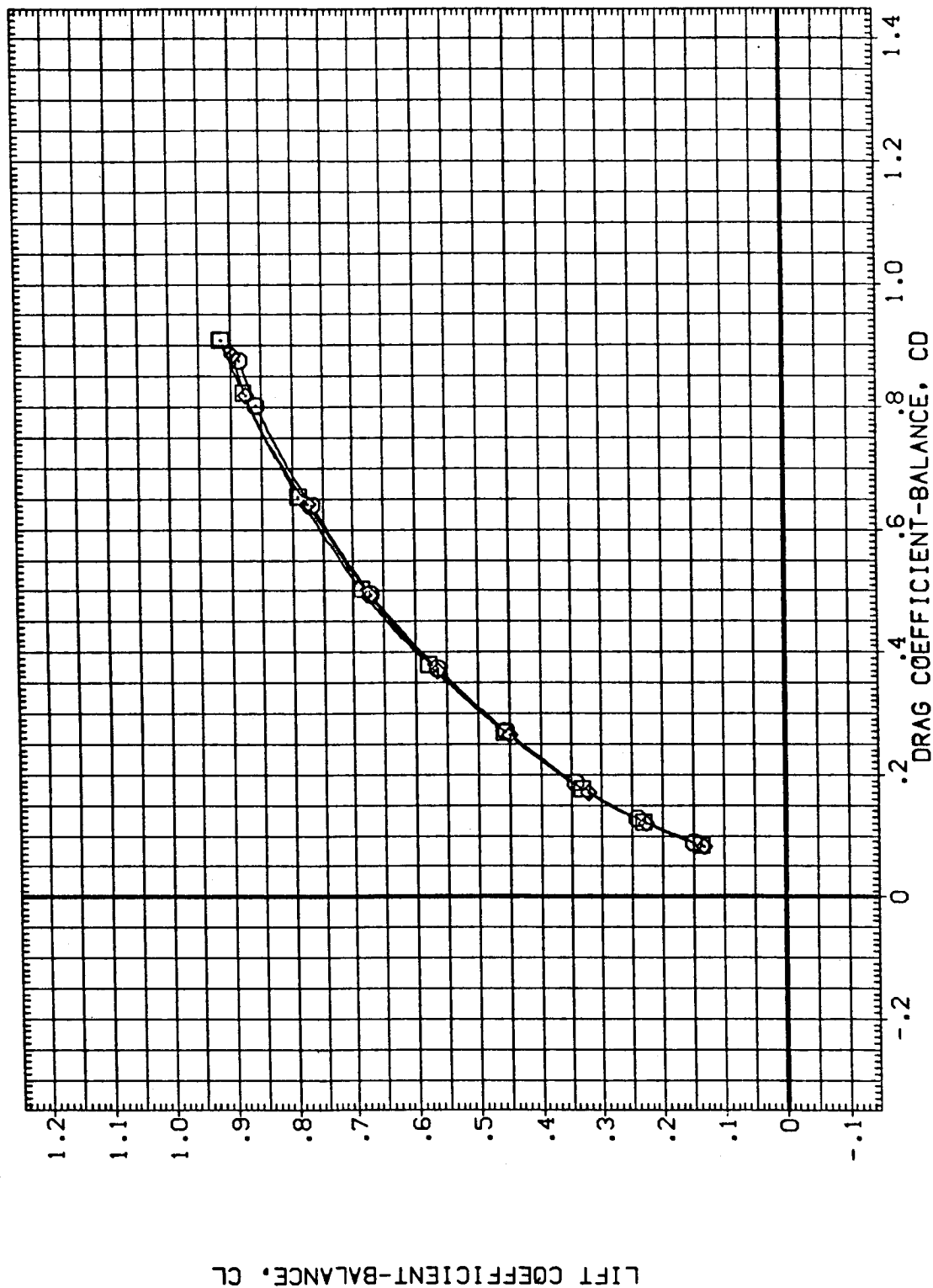


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL      CONFIGURATION DESCRIPTION  
 (EE0001)      AMES 3.5-190 0A98 (011-M7+M14)  
 (EE0009)      AMES 3.5-190 0A98 (011-M7+M14-N24)  
 (EE0017)      AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA      ELEVON      BOFLAP      SPDRK      REFERENCE INFORMATION

BETA	ELEVON	BOFLAP	SPDRK	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE	SQ.FT.
.000	.000	-11.700	55.000	2690.0000	474.8000	936.6800	1076.7000	.0000	.0000	.0150	IN.
.000	.000	-11.700	55.000								IN.X0
.000	.000	-11.700	55.000								IN.Y0
											IN.Z0

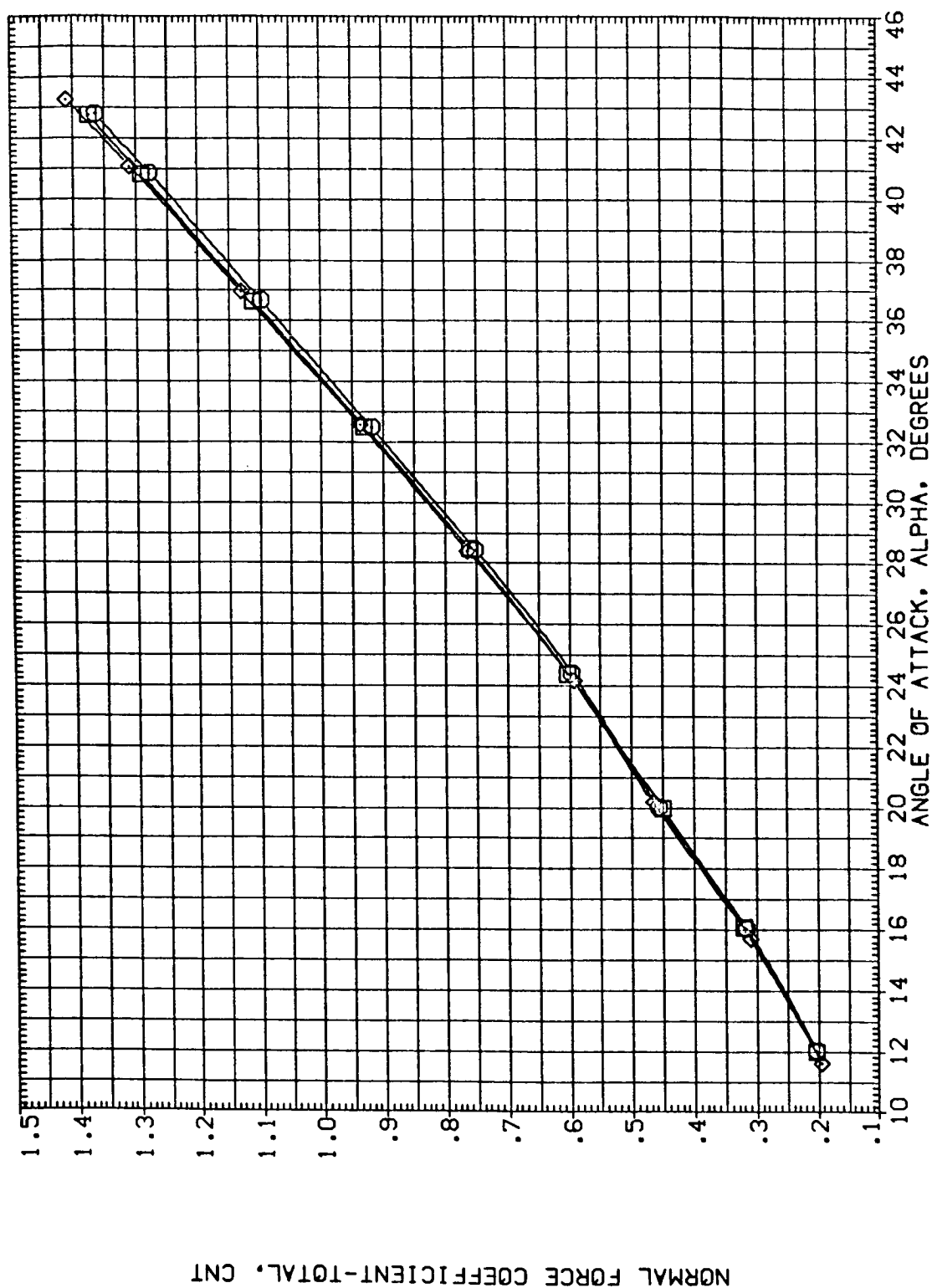


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

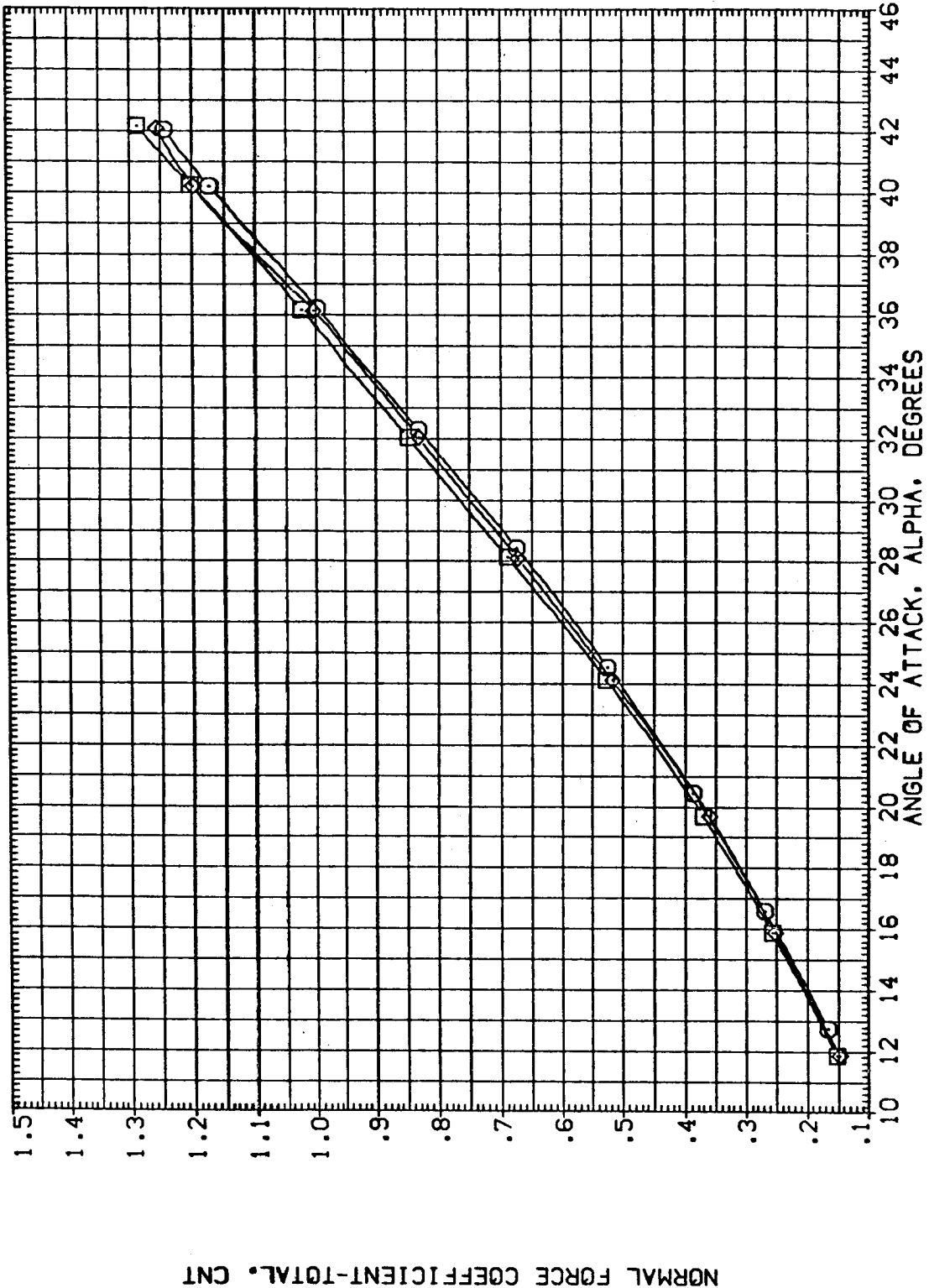


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(EE0001)  
(EE0009)  
(EE0017)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7+M14)  
AMES 3.5-190 0A98 (011-M7+M14-N24)  
AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000  
ELEVON .000  
BOFLAP -11.700  
SPOBRK 55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.  
YMRP .0000 IN.  
ZMRP 375.0000 IN.  
SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

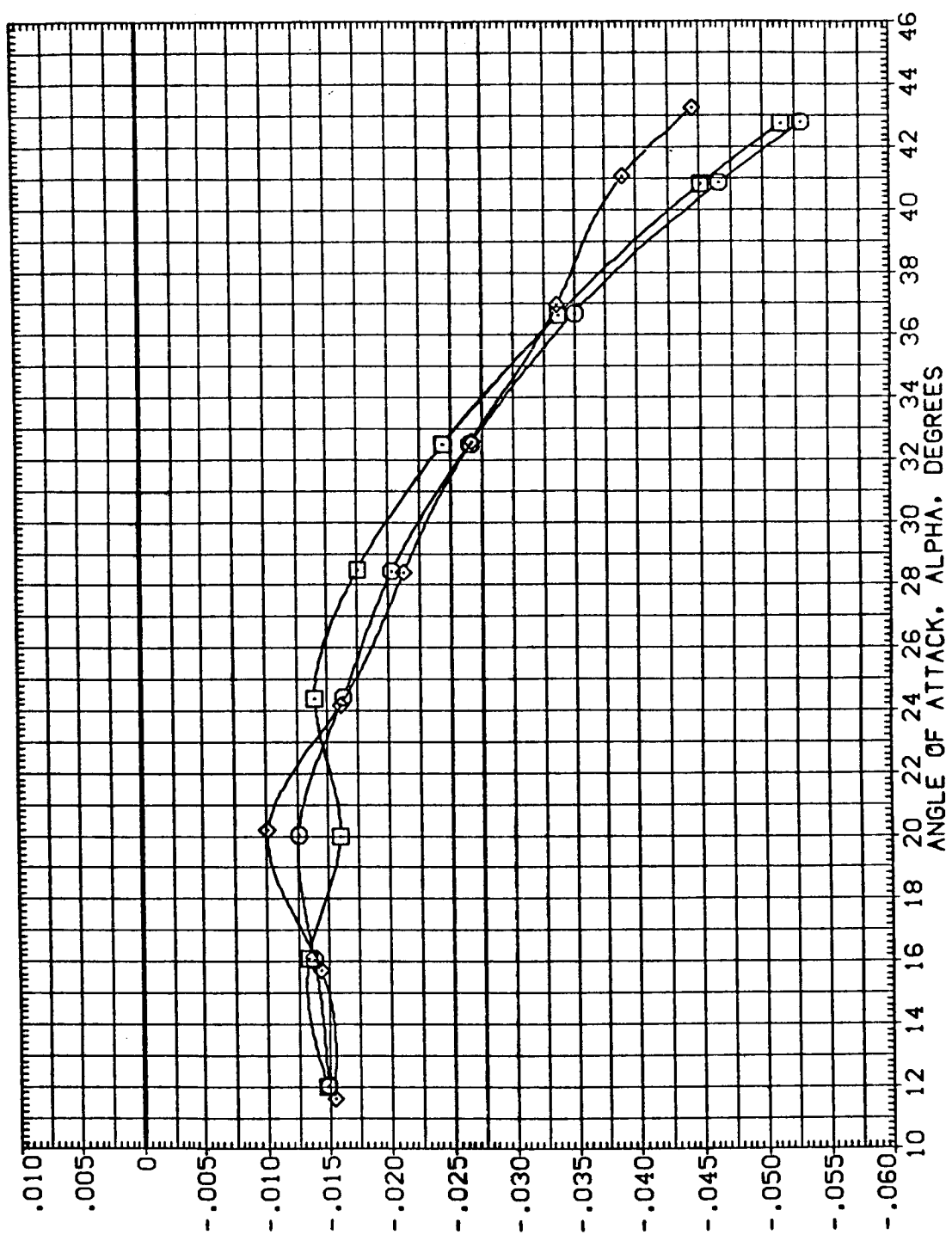


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEQ001)	AMES 3.5-190 0A98 (011-M7-H14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ009)	AMES 3.5-190 0A98 (011-M7-H14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EEQ017)	AMES 3.5-190 0A98 (011-M7-H14-N24-DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

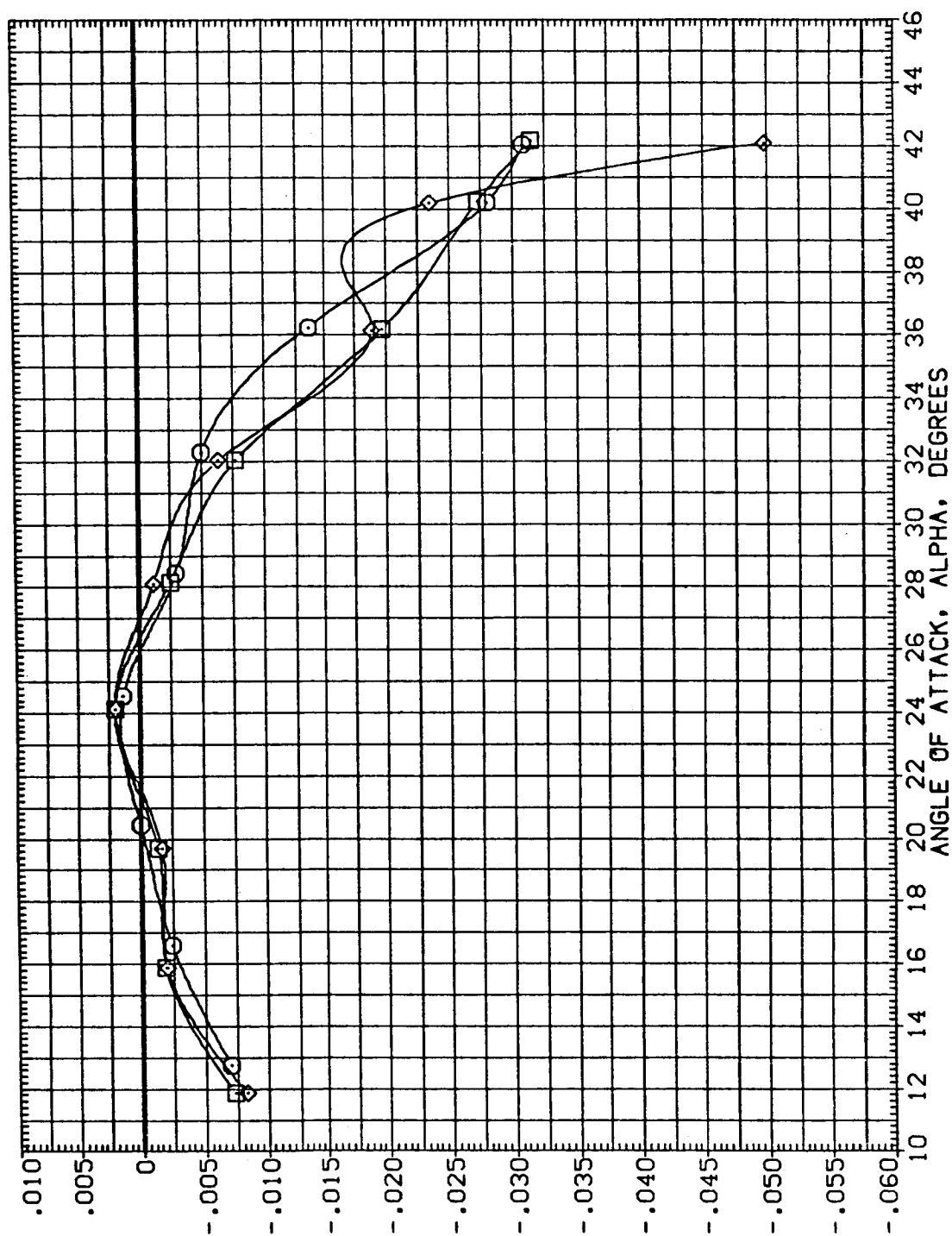


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EEQ001)	AMES 3.5-190 OA98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ009)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EEQ017)	AMES 3.5-190 OA98 (011-M7-M14-N24+JUNNY STING)	.000	.000	-11.700	55.000	BREF 936.5800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

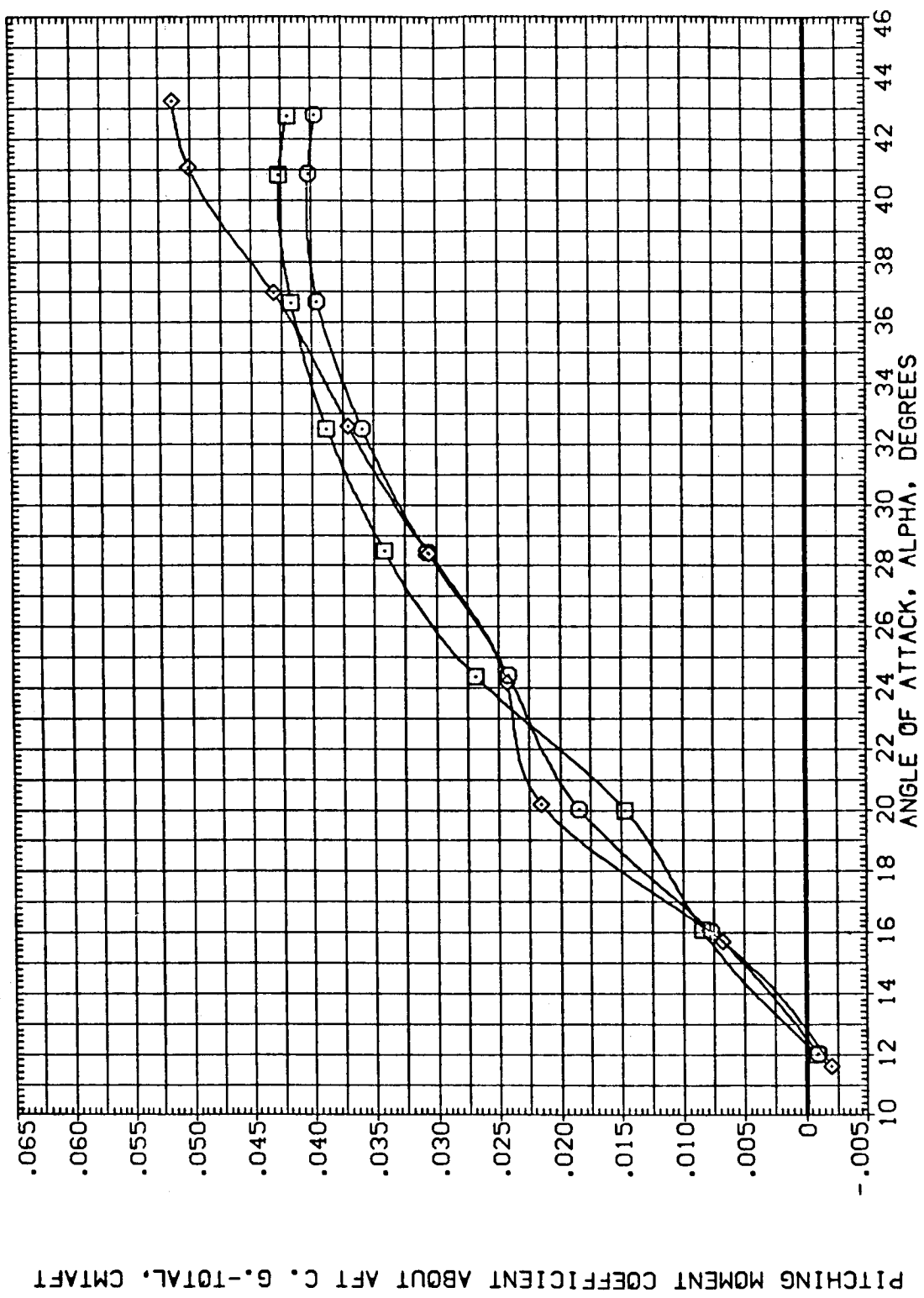


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEQ001)	AMES 3.5-190 0A98 (011-M7-H14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ009)	AMES 3.5-190 0A98 (011-M7-H14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EEQ017)	AMES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

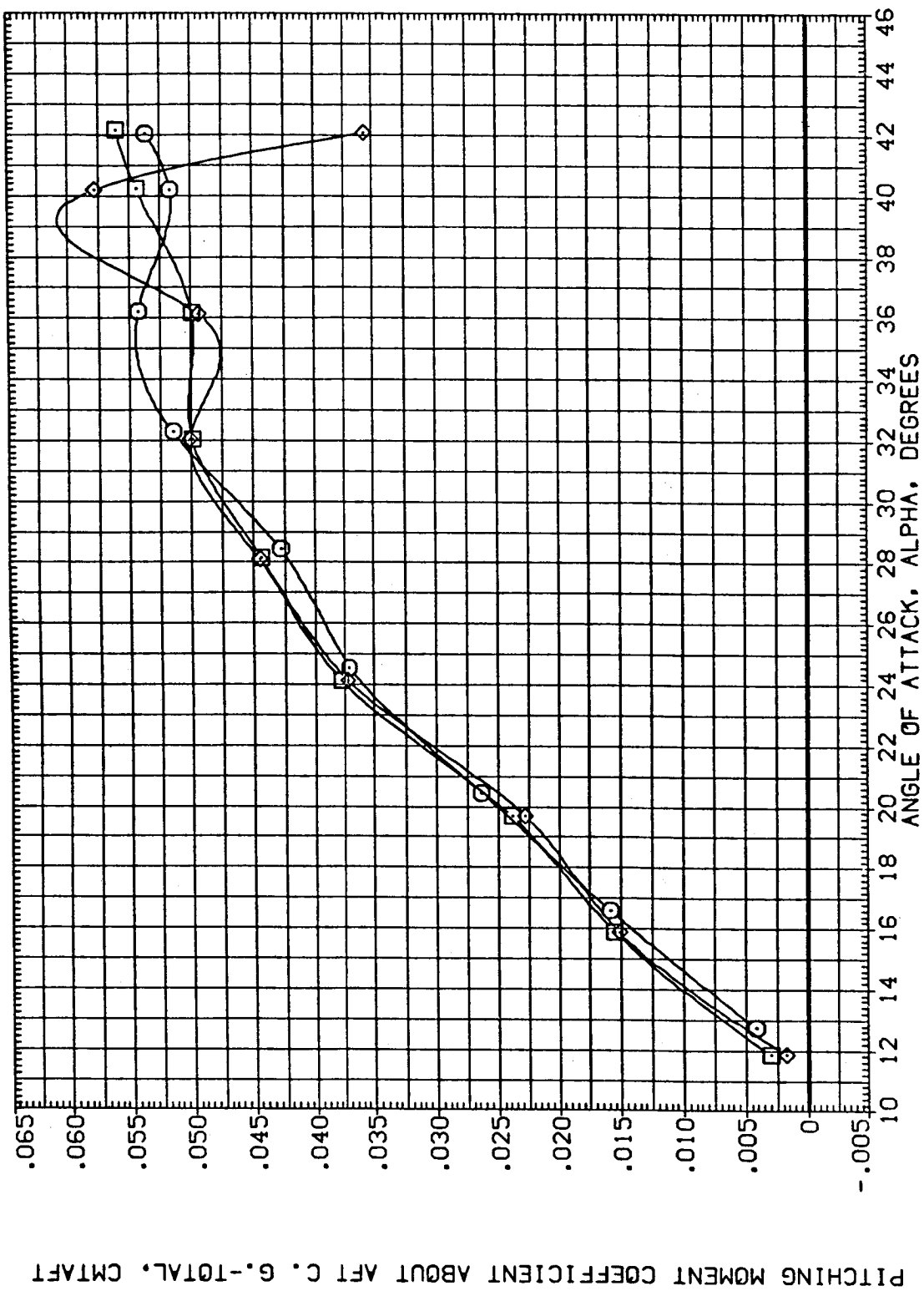


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 0A98 (011-M7+M14)

(EE0009) AMES 3.5-190 0A98 (011-M7+M14-N24)

(EE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000  
.000  
.000

ELEVON .000  
.000  
.000

BOFLAP -11.700  
-11.700  
-11.700

SPOBRK 55.000  
55.000  
55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

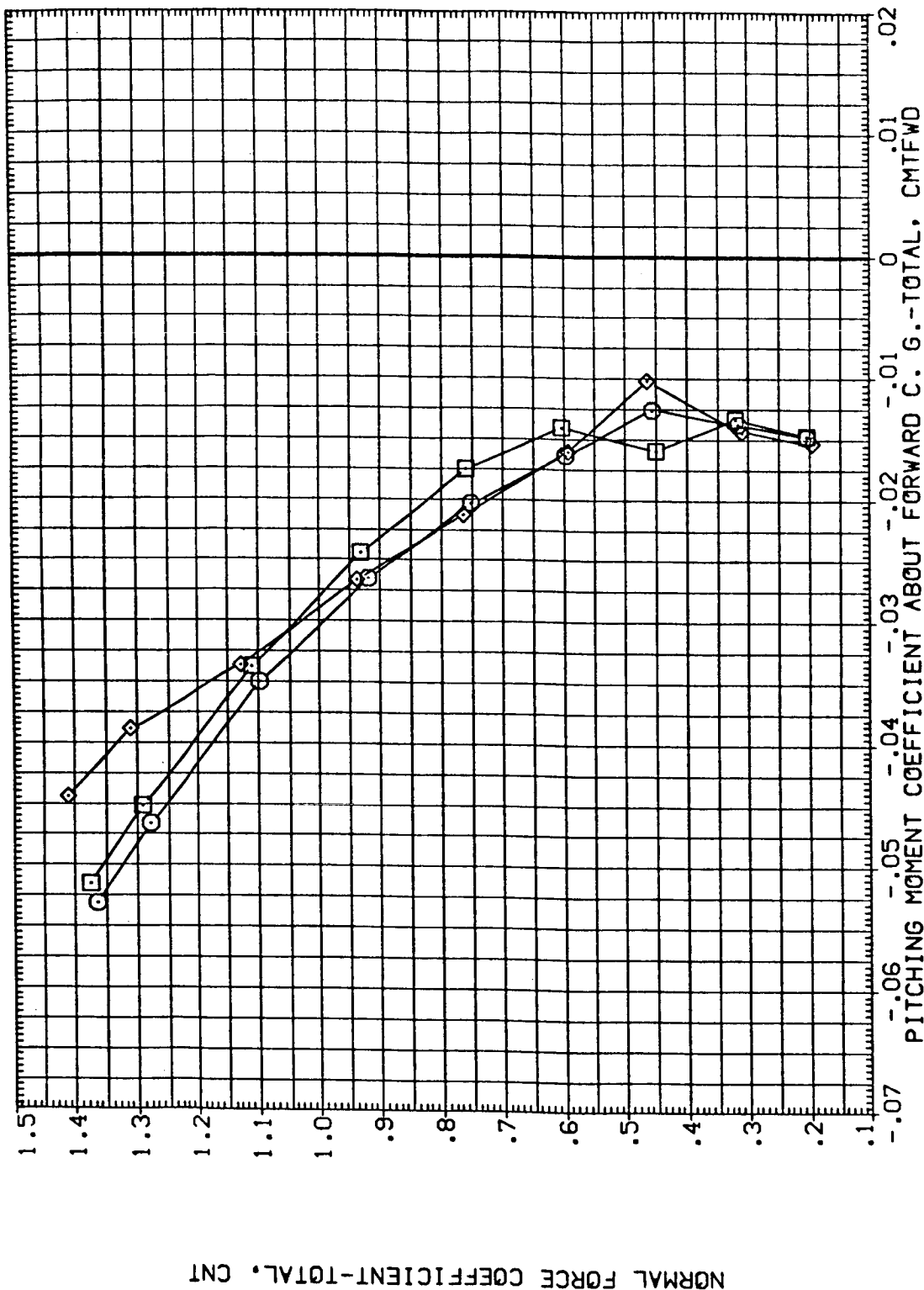


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

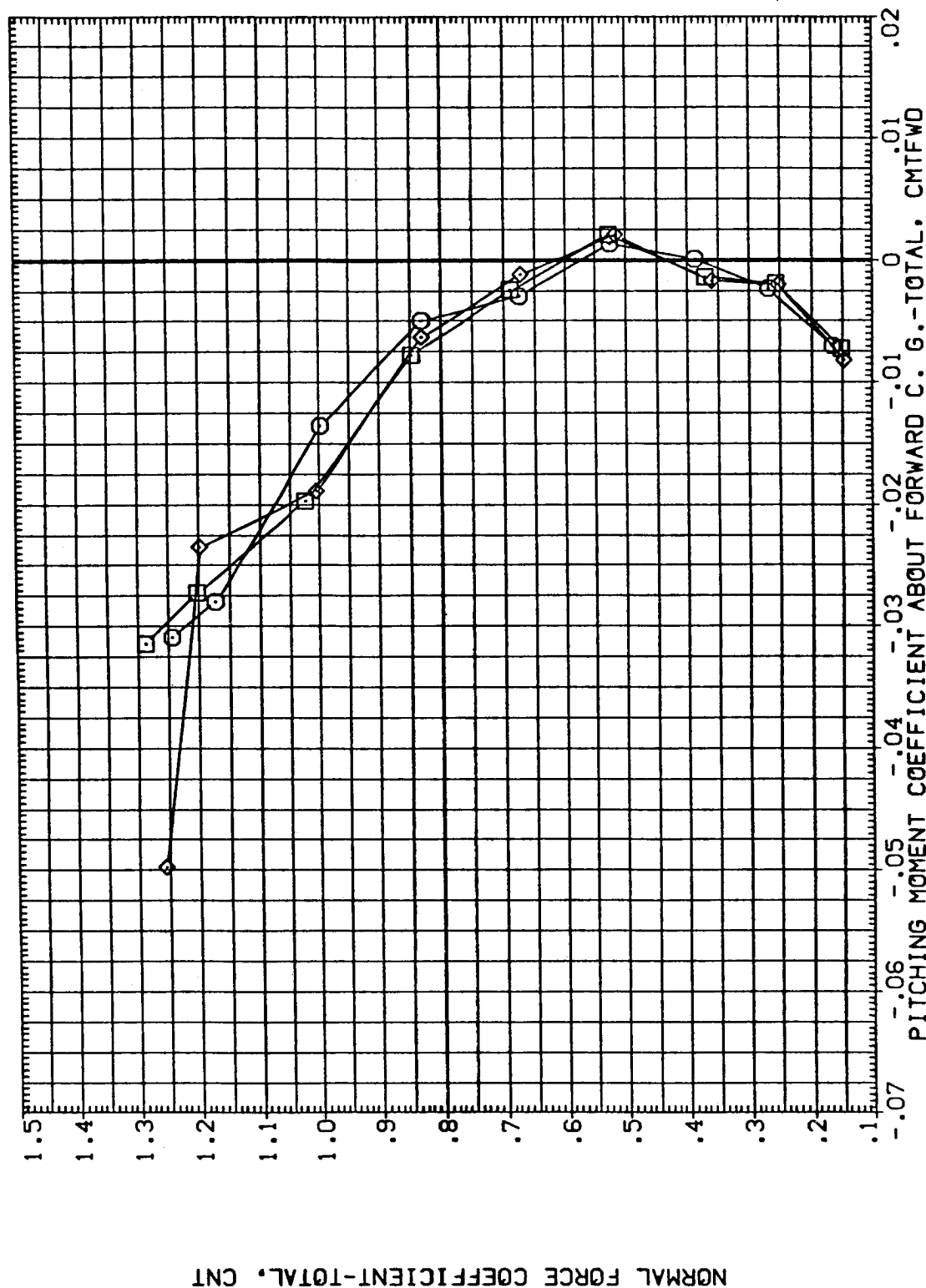


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0001) AMES 3.5-190 0A98 (011-M7+M14)

(EE0009) AMES 3.5-190 0A98 (011-M7+M14-N24)

(EE0017) AMES 3.5-190 0A98 (011-M7+M14-N24+QUINNY STING)

BETA ELEVON BOFLAP SPOBRK

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

.000 .000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

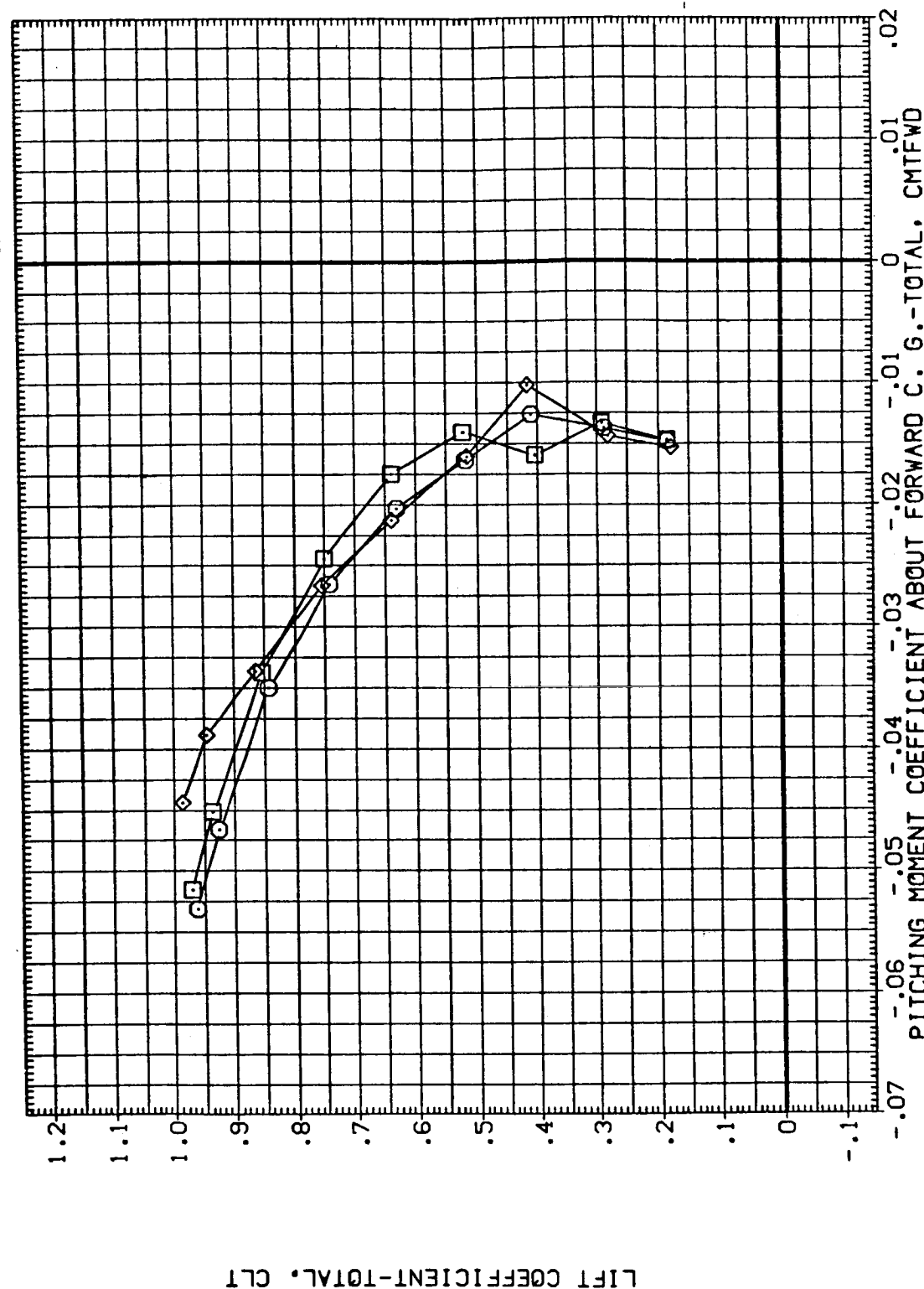


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 OA98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 50.000
(EE0009)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

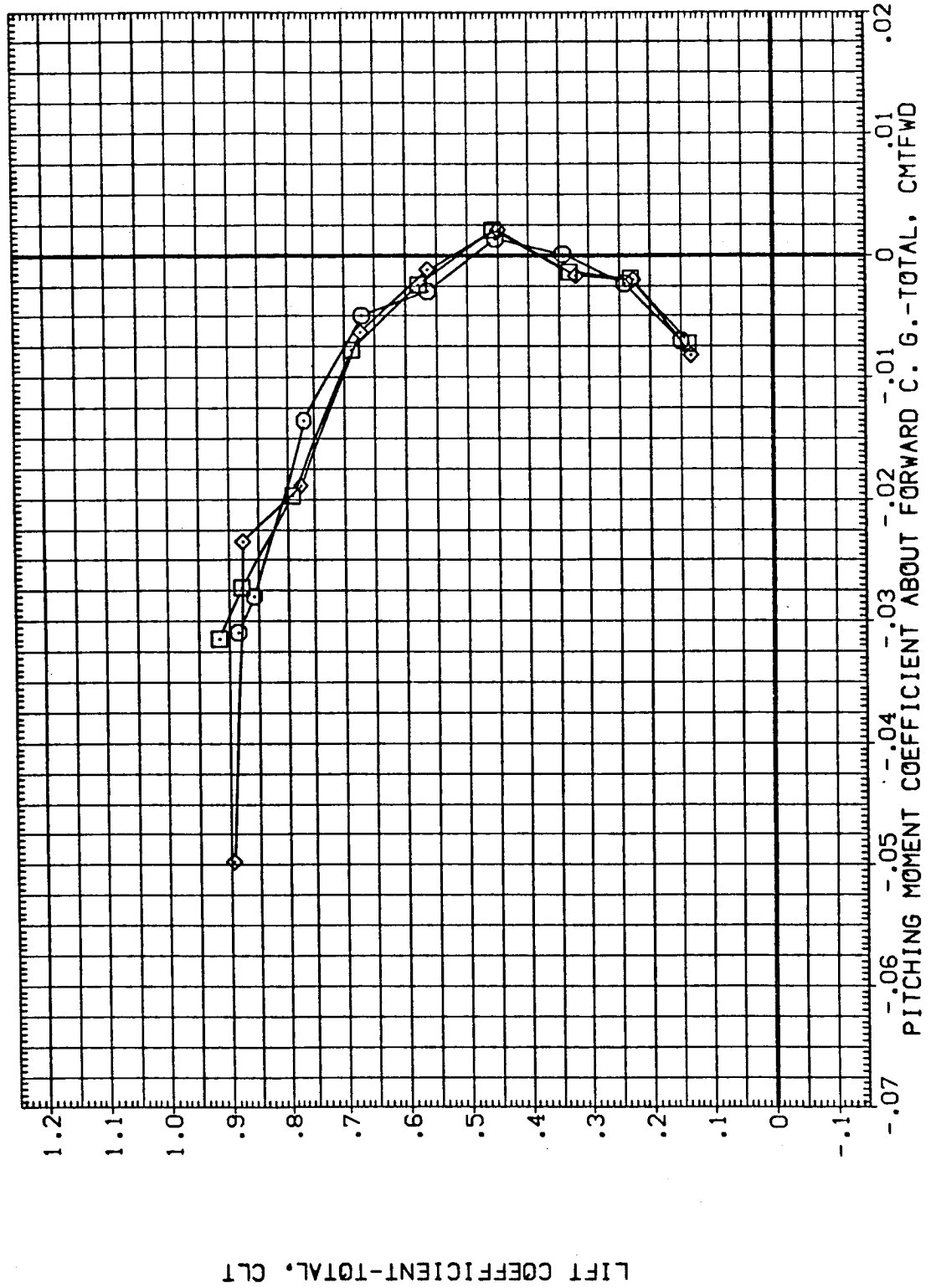


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

LIFT COEFFICIENT-TOTAL, CLT

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    BETA    ELEVON    BOFLAP    SPOBRK    REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14+N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14+N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN. X0
						ZMRP 375.0000 IN. Y0
						SCALE .0150

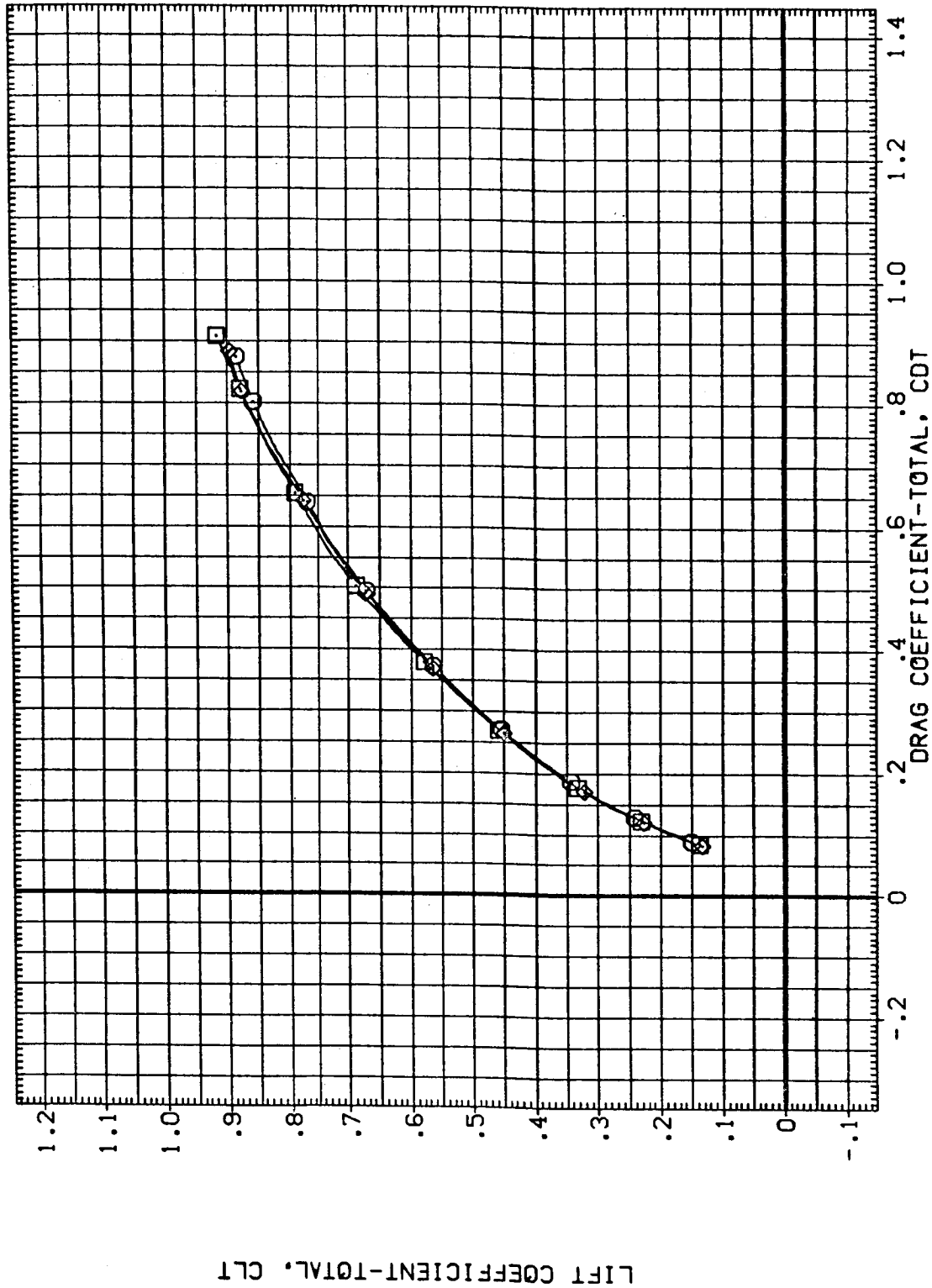


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

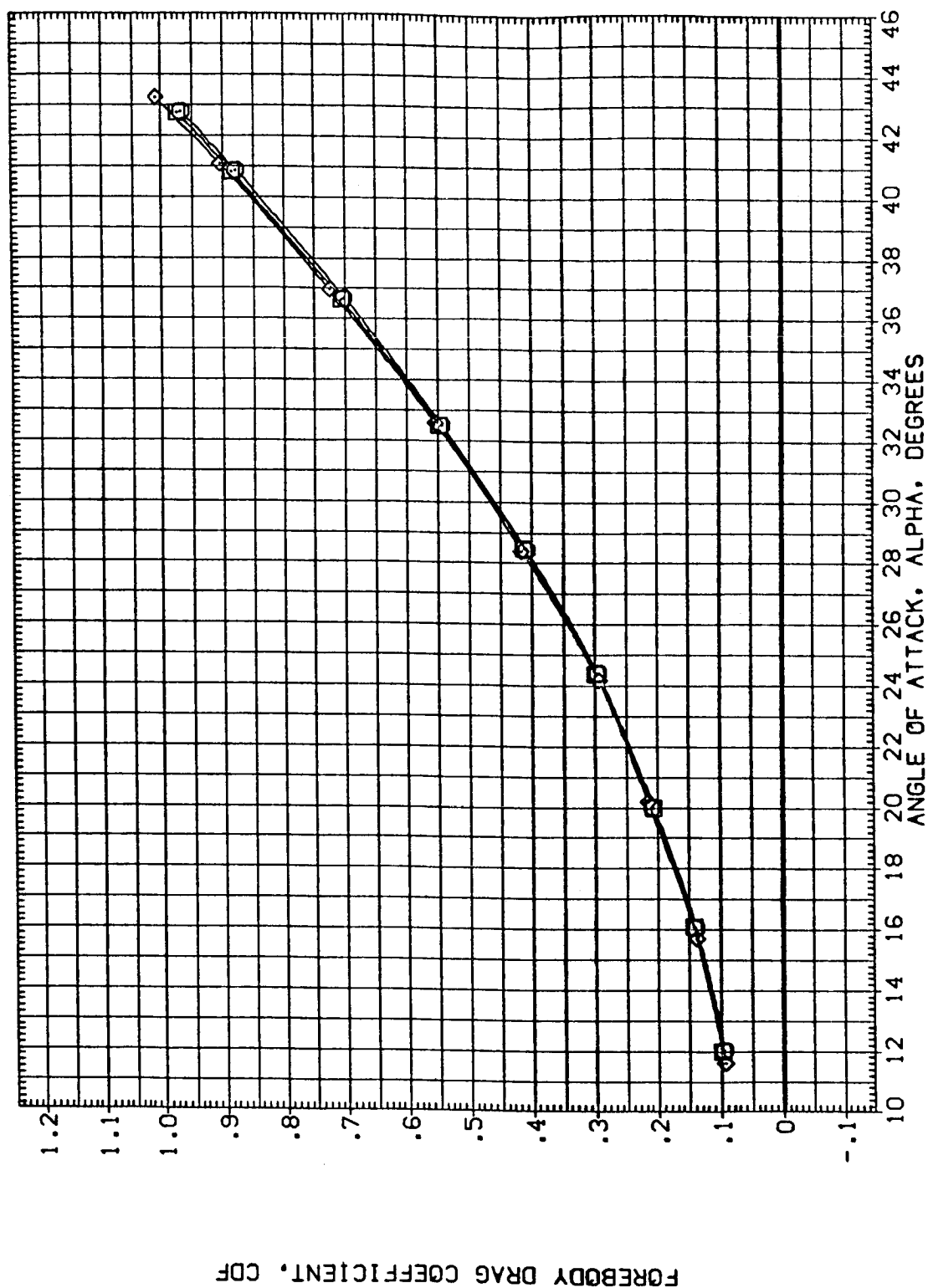


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPODBRK	REFERENCE INFORMATION
(EE0001)	AVES 3.5-190 DA98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AVES 3.5-190 DA98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AVES 3.5-190 DA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

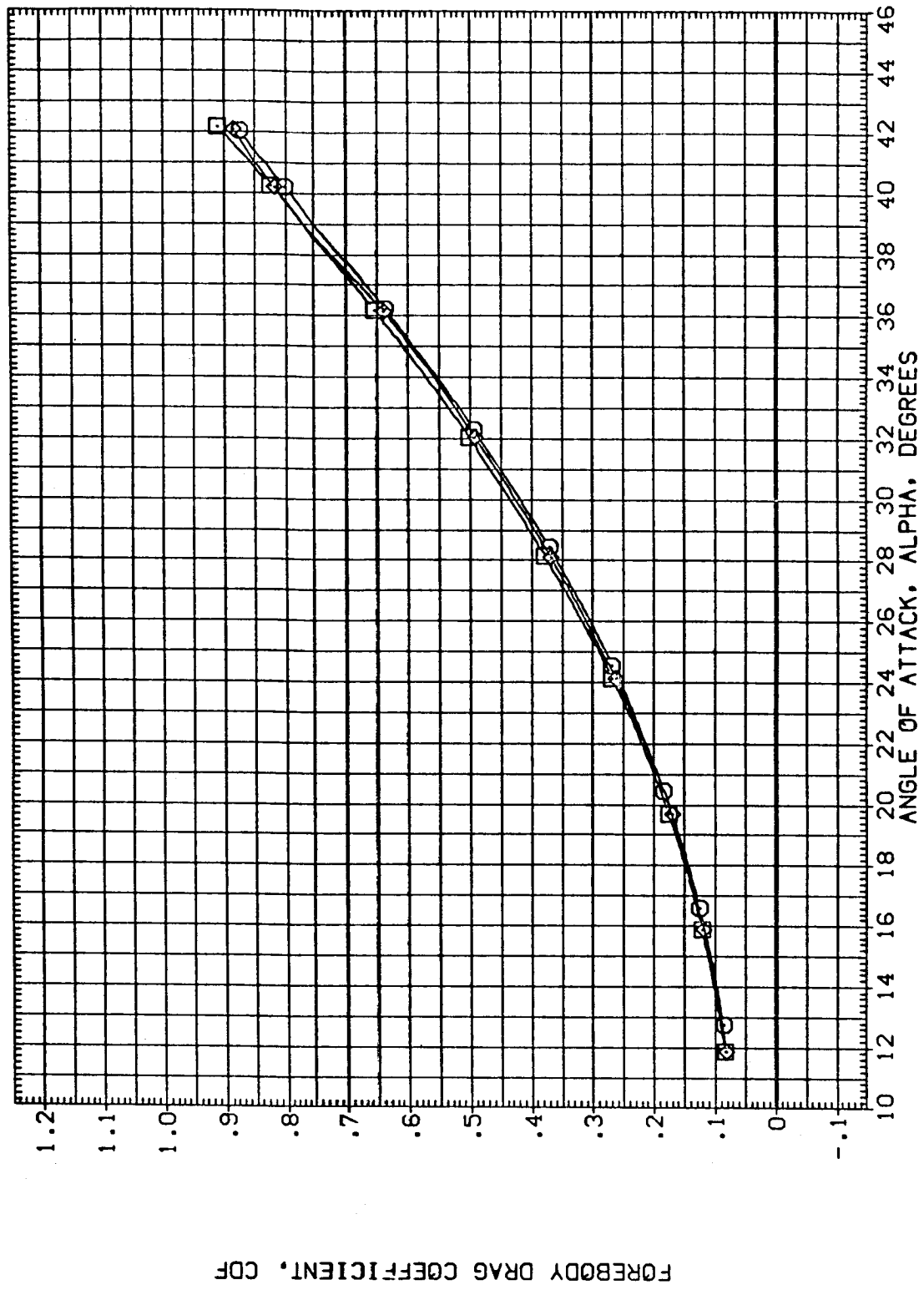


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

REFERENCE INFORMATION	
	SQ.FT.
SREF	2690.0000
LREF	474.8800
BREF	936.6800
XMRP	1076.7000
YMRP	.0000
ZMRP	375.0000
SCALE	.0150

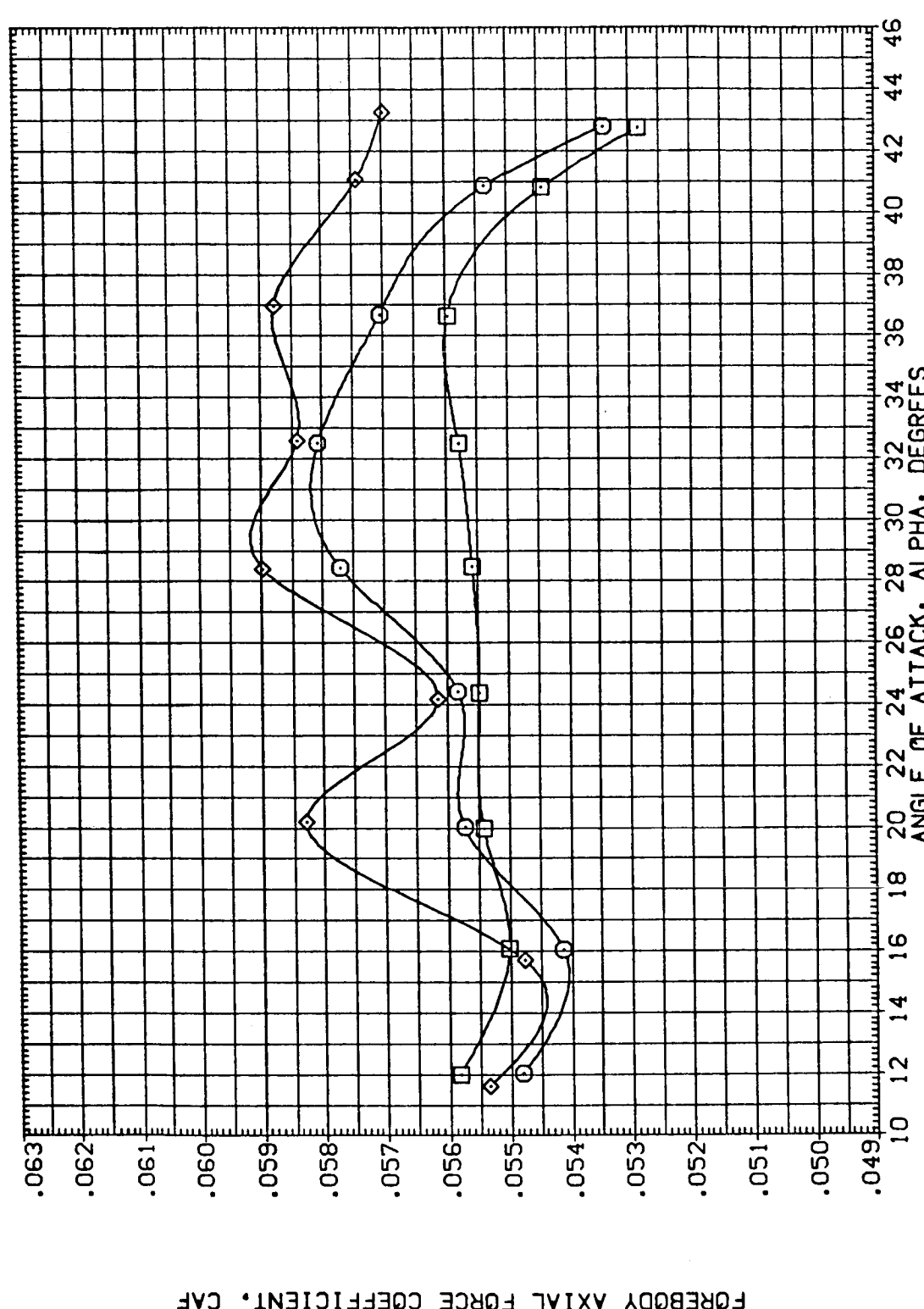


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

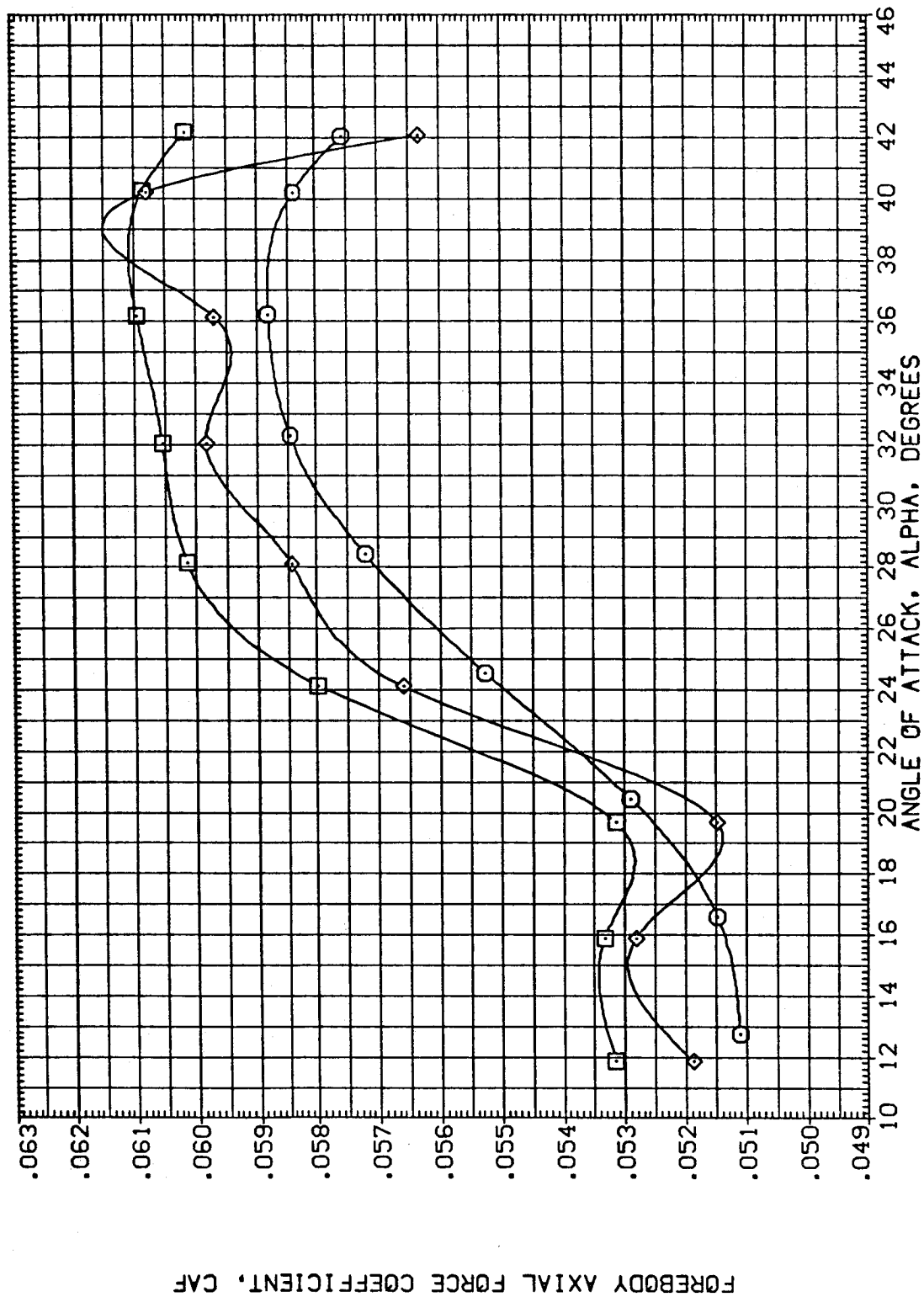


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEG001)	AVES 3.5-190 0A98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEG009)	AVES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EEG017)	AVES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

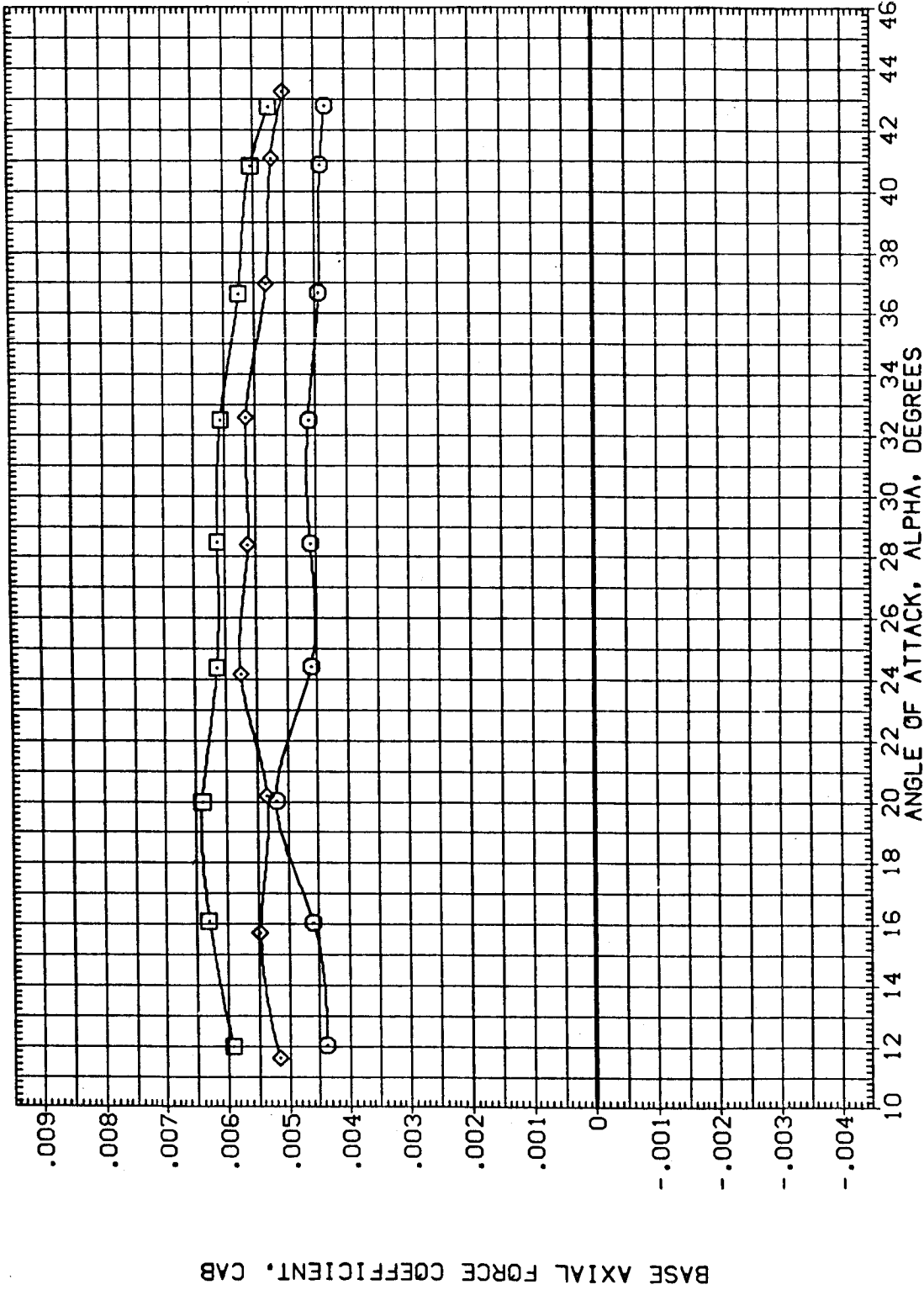


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(EE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.8800 IN.
						XMRP 1076.7000 IN.X8
						YMRP .0000 IN.Y8
						ZMRP 375.0000 IN.Z8
						SCALE .0150

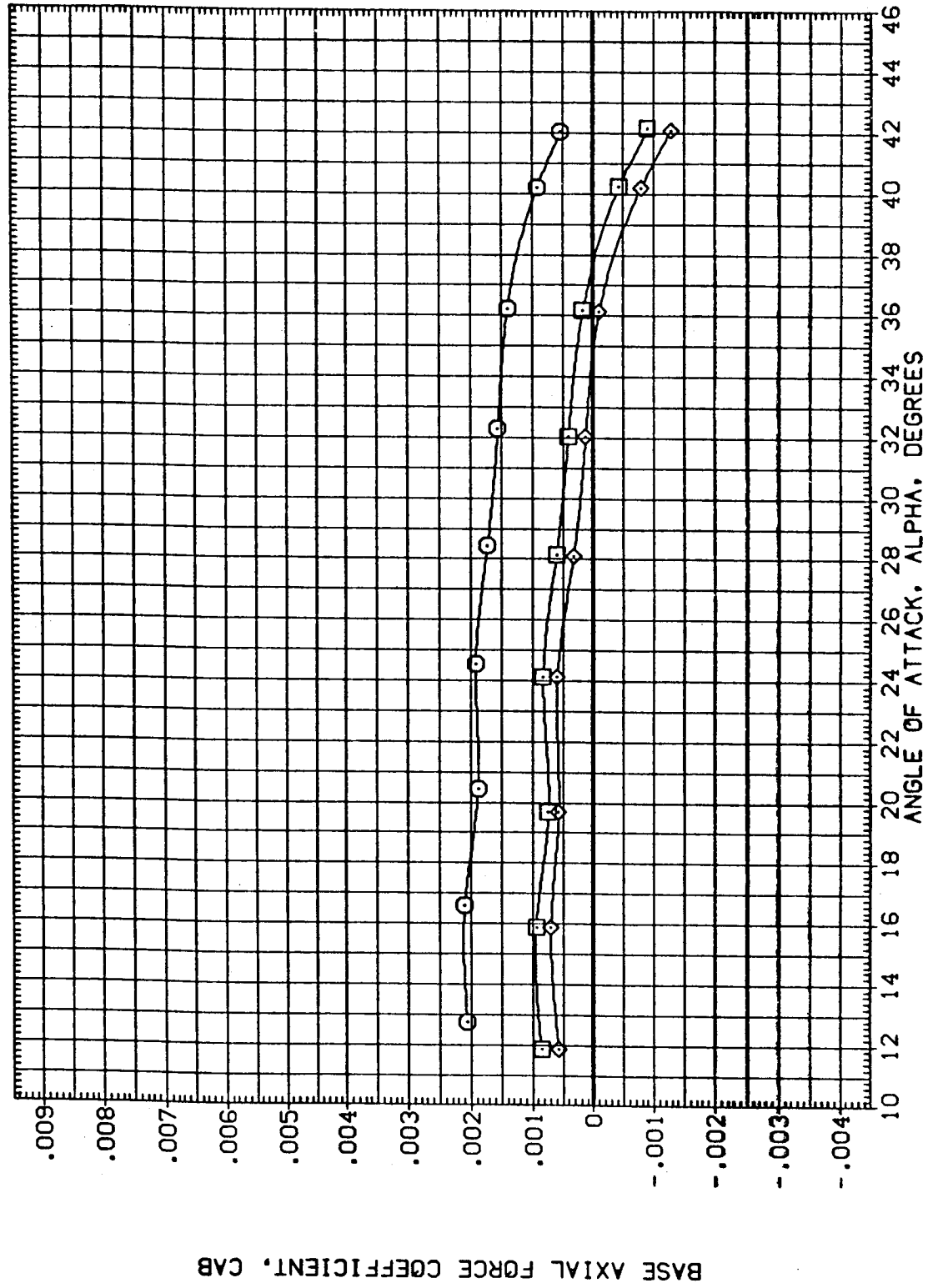


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0001)	AMES 3.5-190 OA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(BE0009)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(BE0017)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN. X0
						XMRP 1076.7000 IN. Y0
						YMRP .0000 IN. Z0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

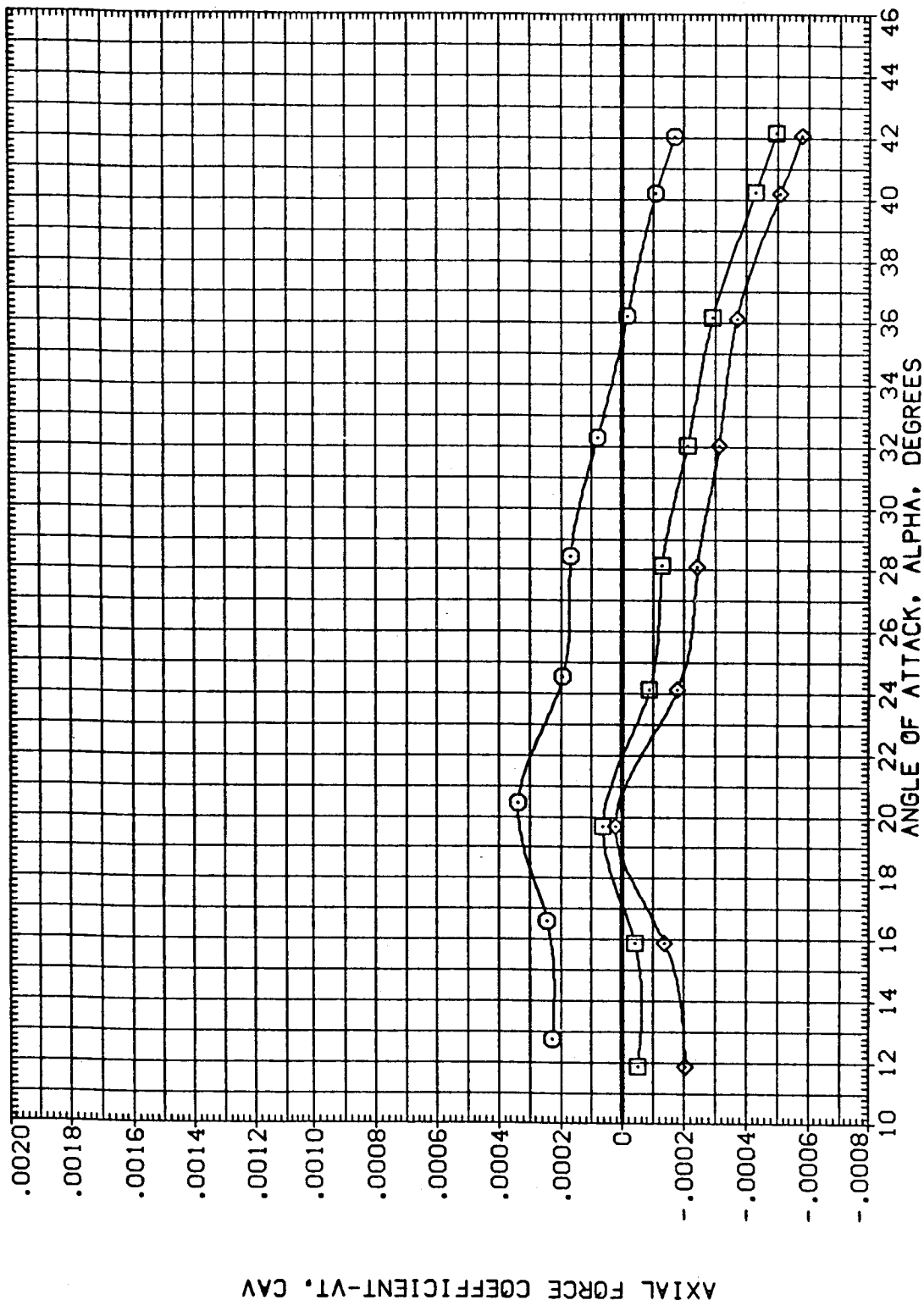


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BE0001)	AMES 3.5-190 GA98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SO.FT.
(BE0009)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(BE0017)	AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6900 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

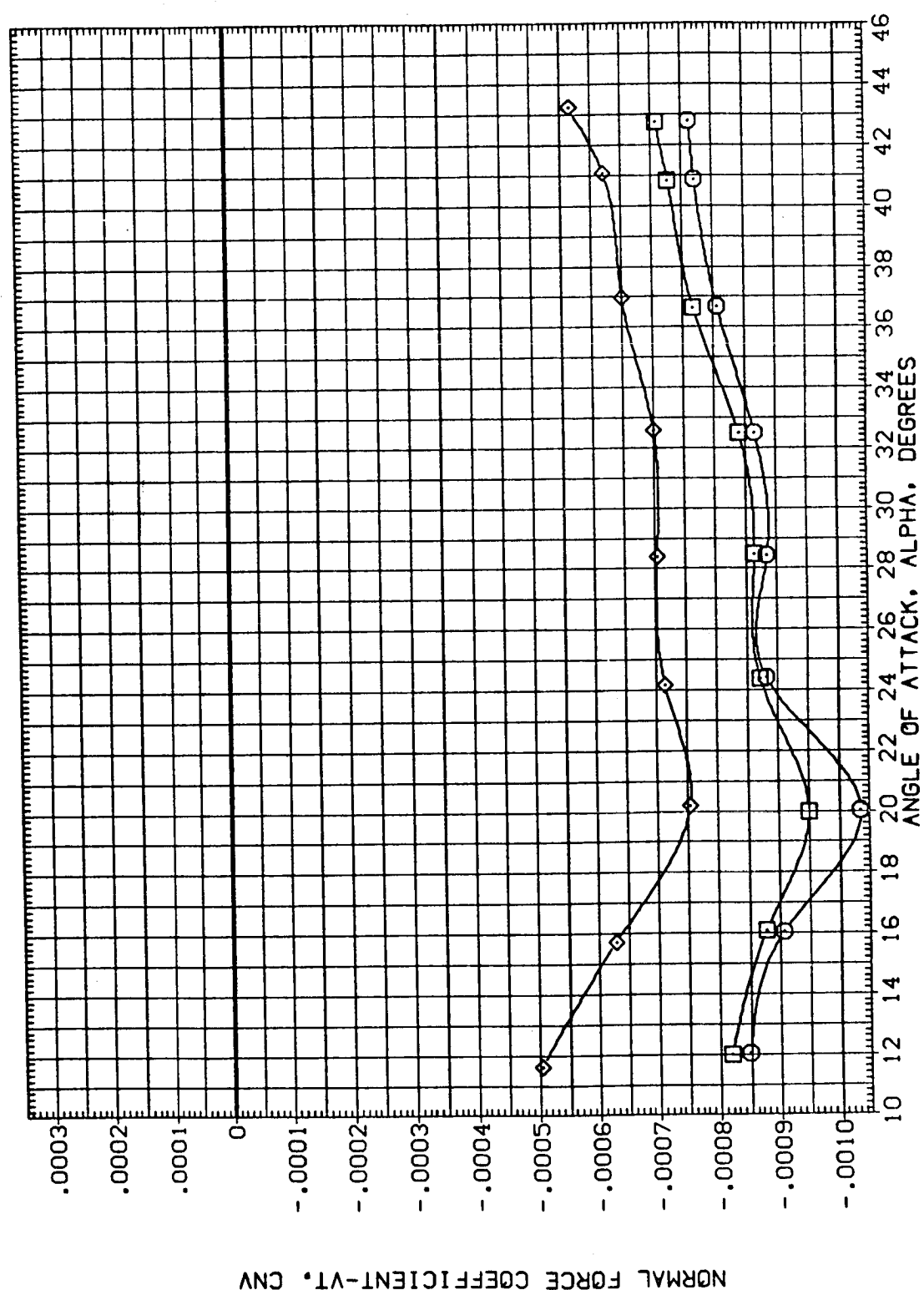


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BE0001)	AVES 3.5-190 OA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0009)	AVES 3.5-190 OA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LRP 474.8000 IN.
(BE0017)	AVES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.8800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

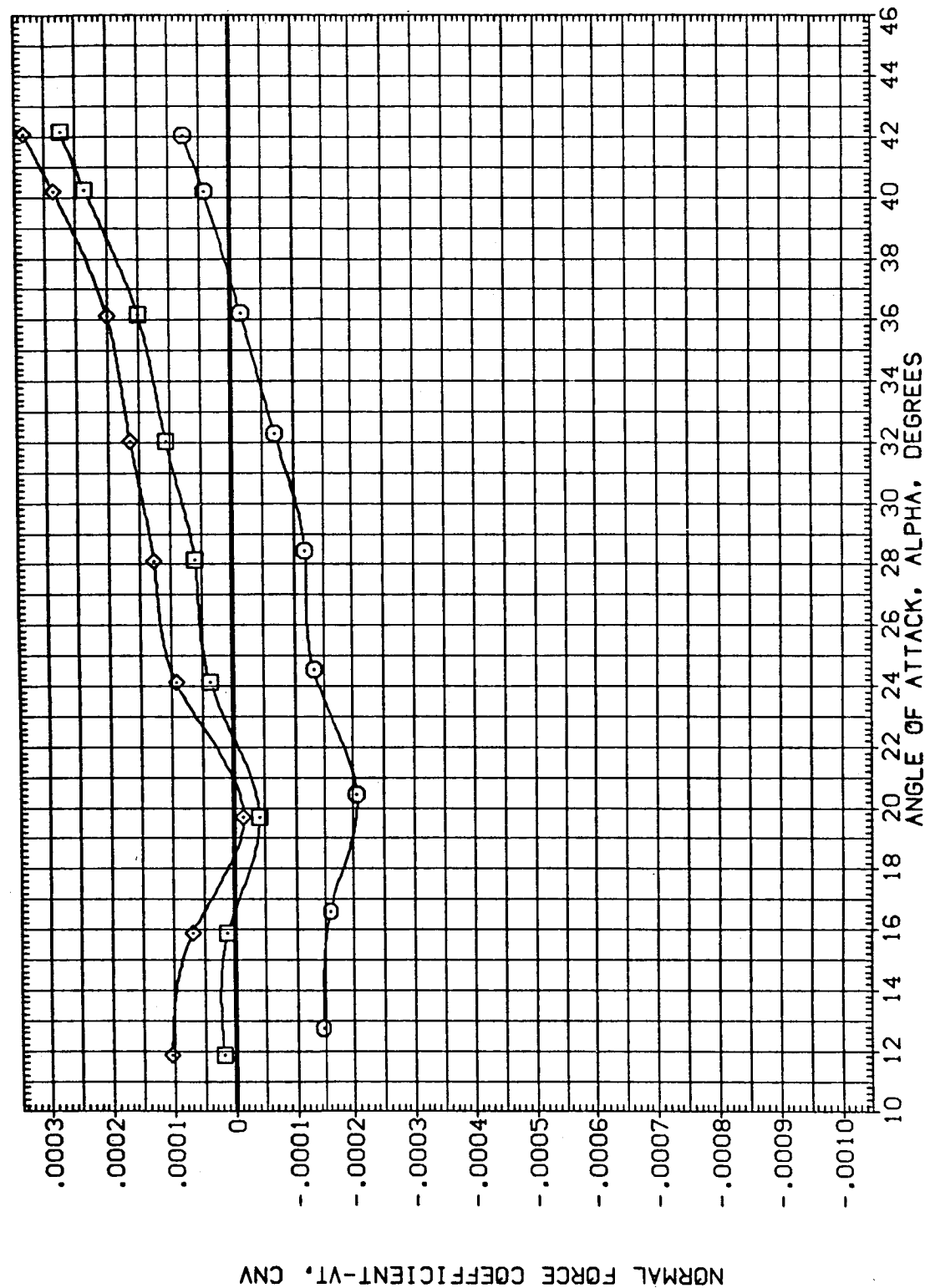


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(BEQ001)	AMES 3.5-190 0A98 (011-M7+M14)
(BEQ009)	AMES 3.5-190 0A98 (011-M7+M14-N24)
(BEQ017)	AMES 3.5-190 0A98 (011-M7+M14-N2+DUMMY STRING)

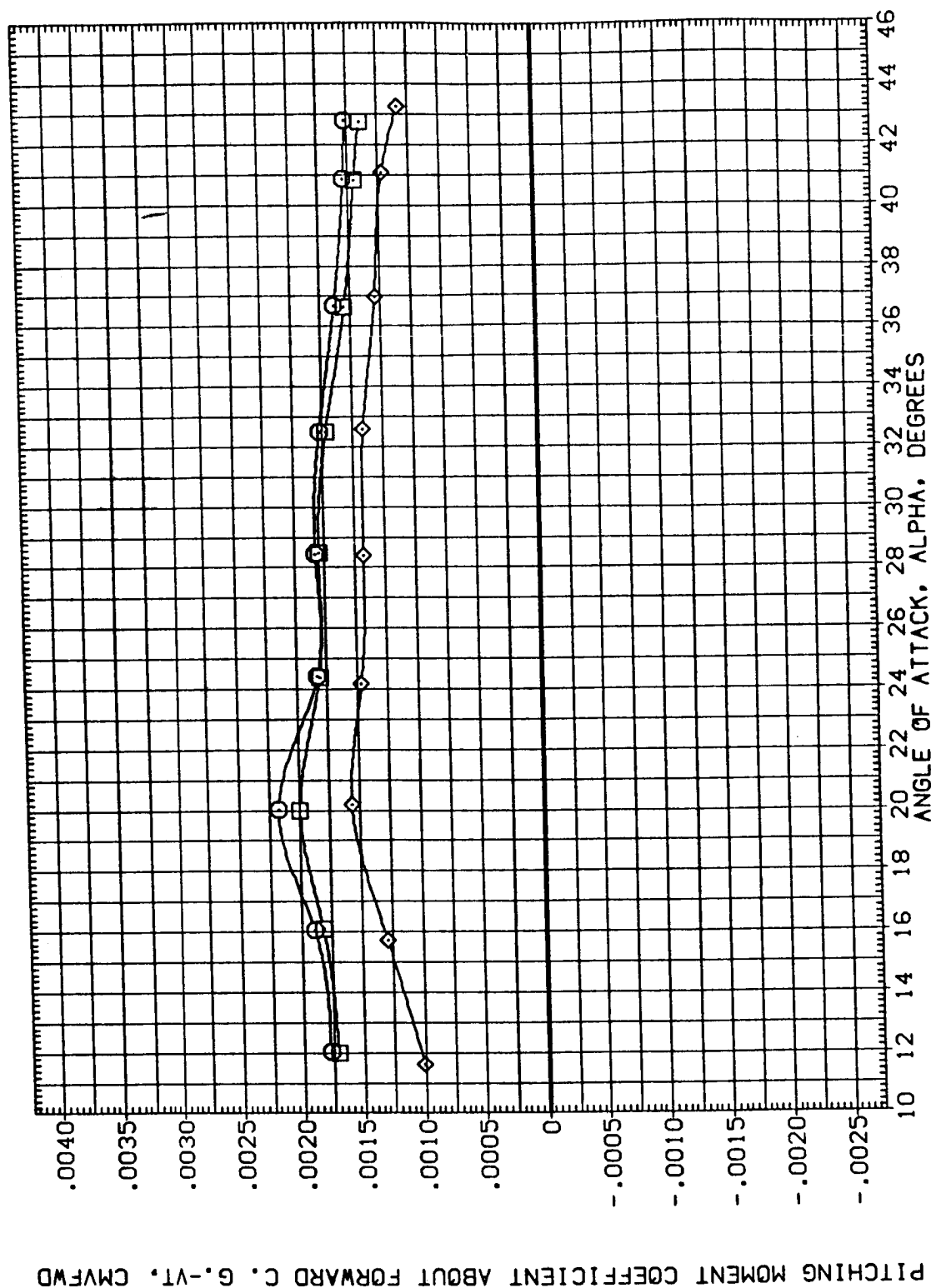


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

**CALMACH = 5.25**



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BEQ001)	AYES 3.5-190 0A98 (011-H7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEQ009)	AYES 3.5-190 0A98 (011-H7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(BEQ017)	AYES 3.5-190 0A98 (011-H7-M14-N24-DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

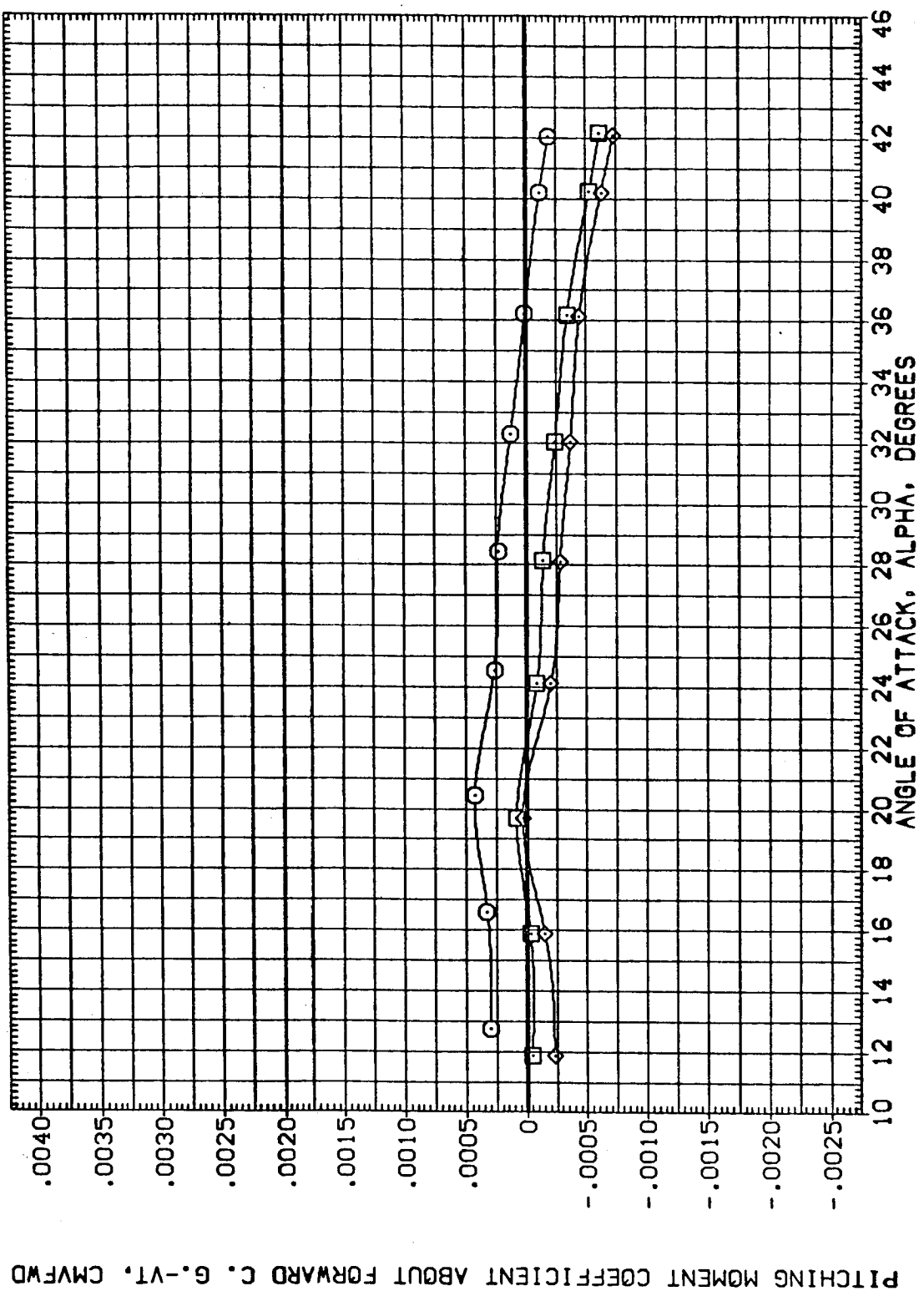


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

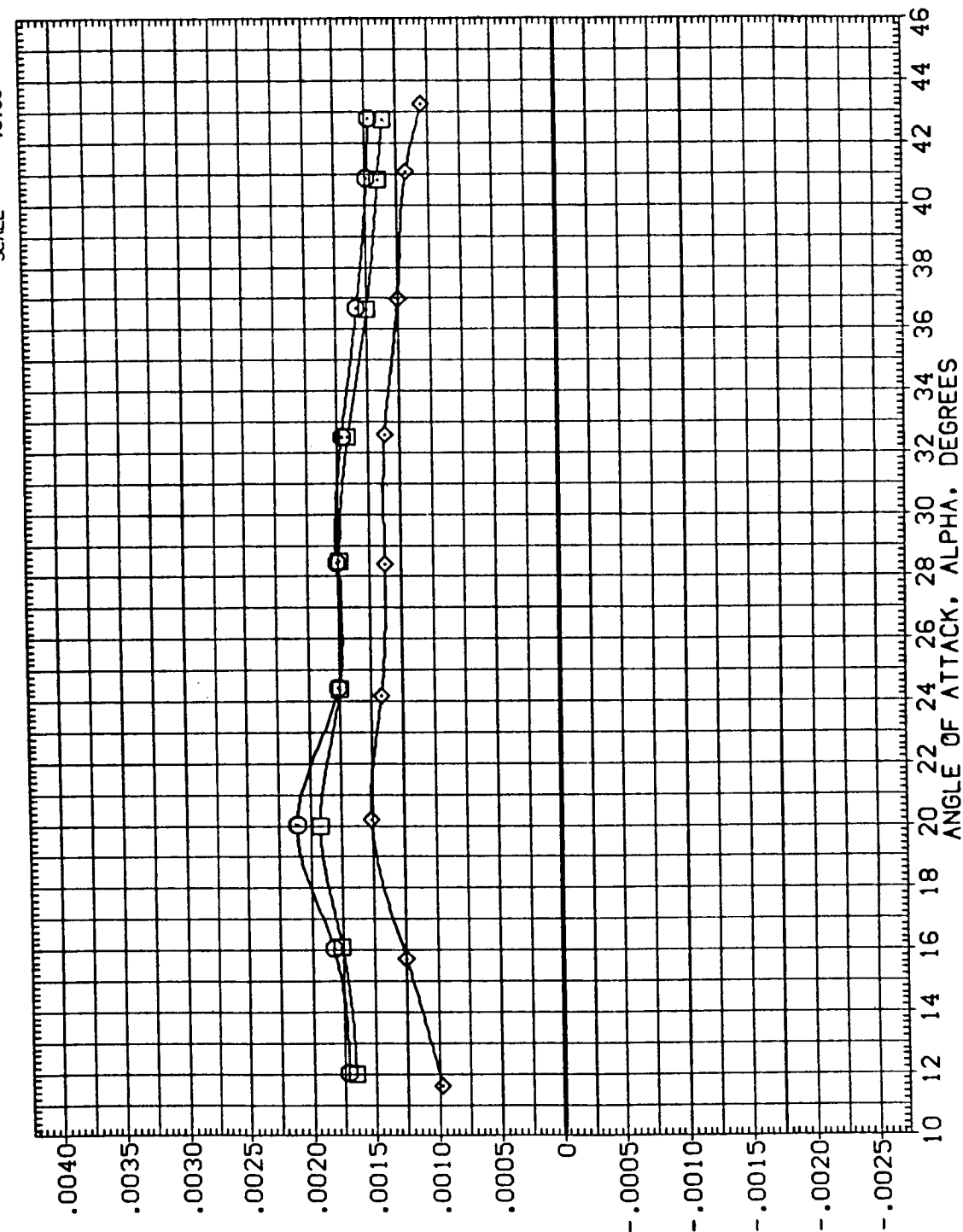


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BE0001)	AVES 3.5-190 0A98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0009)	AVES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(BE0017)	AVES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XPRP 1076.7000 IN.XB
						YPRP .0000 IN.YB
						ZPRP .0000 IN.ZB
						SCALE .0150



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(BEQ001)	AMES 3.5-190 CA98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(BEQ009)	AMES 3.5-190 CA98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF	474.8000 IN.
(BEQ017)	AMES 3.5-190 CA98 (011-M7-M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF	936.6800 IN.X0
						YMRP	1076.7000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VI, CMVAFT

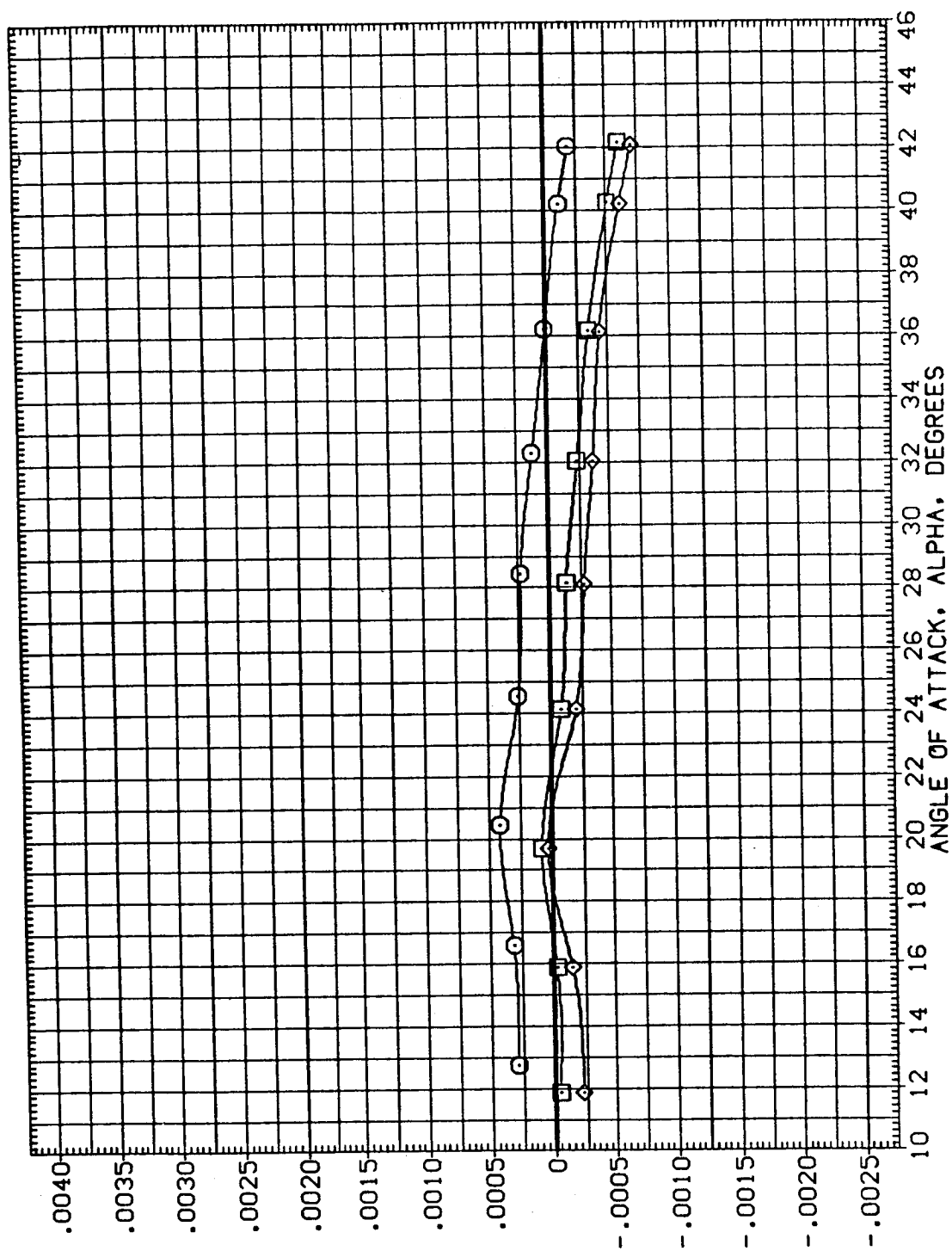


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(YEQ009)  
(YEQ017)

CONFIGURATION DESCRIPTION  
AHES 3.5-190 0A98 (011-M7-H14-N24)  
AHES 3.5-190 0A98 (011-M7-H14-N24-DUMMY STING)

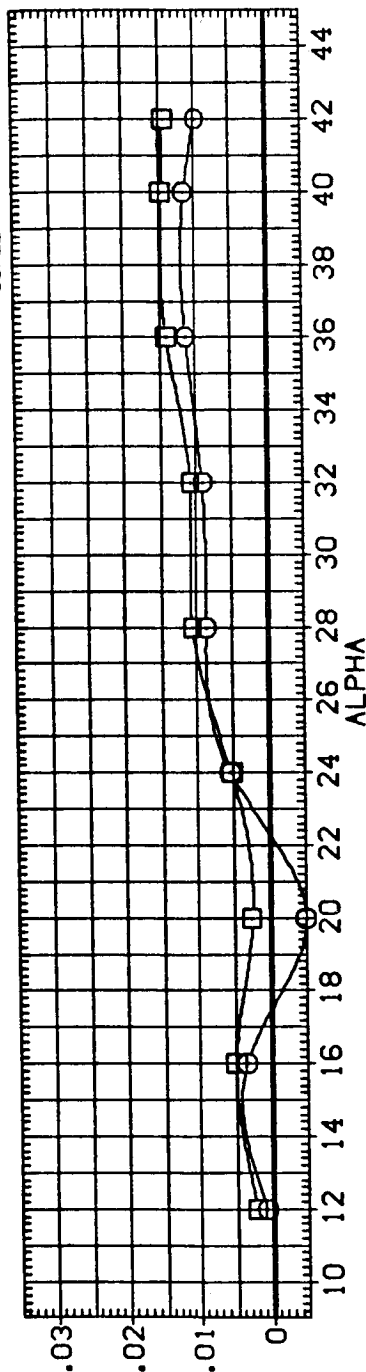
BETA  
.000  
.000

ELEVON  
.000  
.000

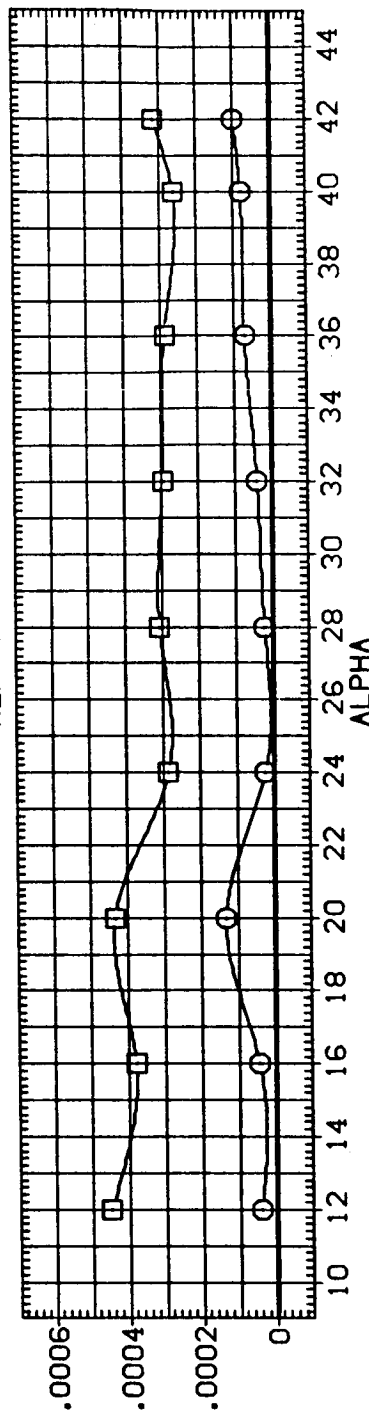
BOFLAP  
-11.700  
-11.700

SPDBRK  
55.000  
55.000

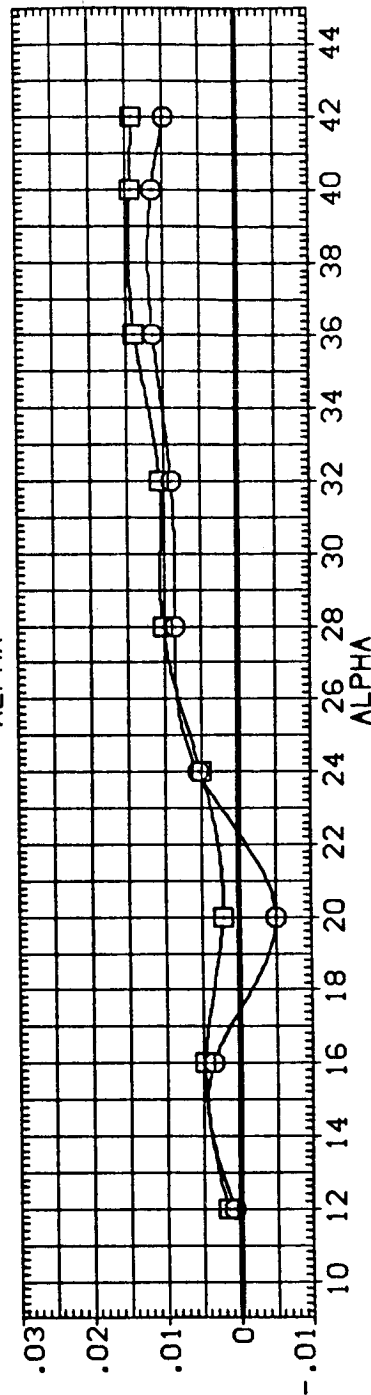
REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150



DCLT








DCLV



DCL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL: (YEQ009) (YEQ017)     

CONFIGURATION DESCRIPTION: AMES 3.5-190 0A98 (011-M7-M14-N24) AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

BETA: .000 .000

ELEVON: .000 .000

BOFLAP: -11.700 -11.700

SPOBRK: 55.000 55.000

REFERENCE INFORMATION: SREF 2690.0000 50.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP .0000 IN. ZMRP .0000 IN. SCALE .0150

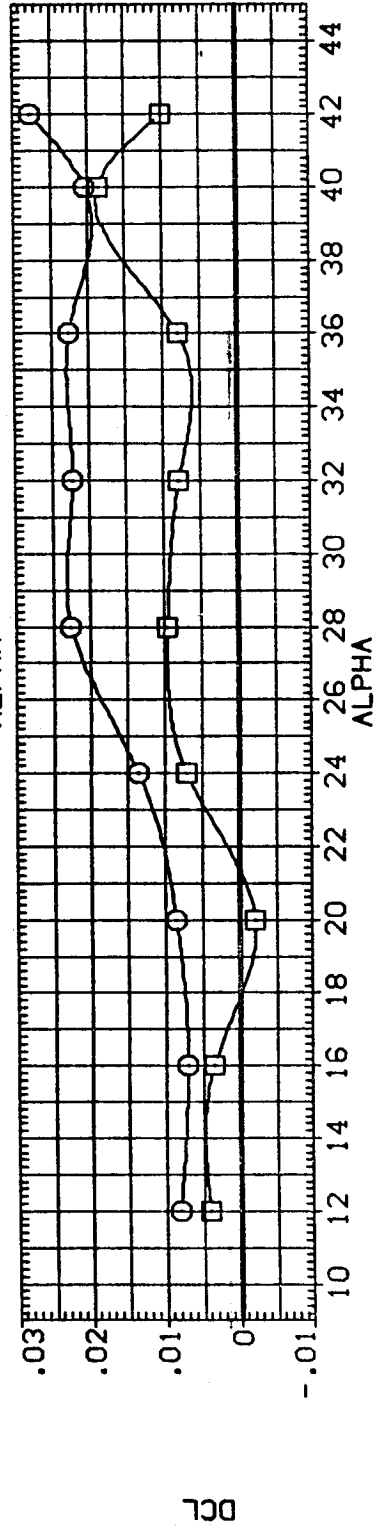
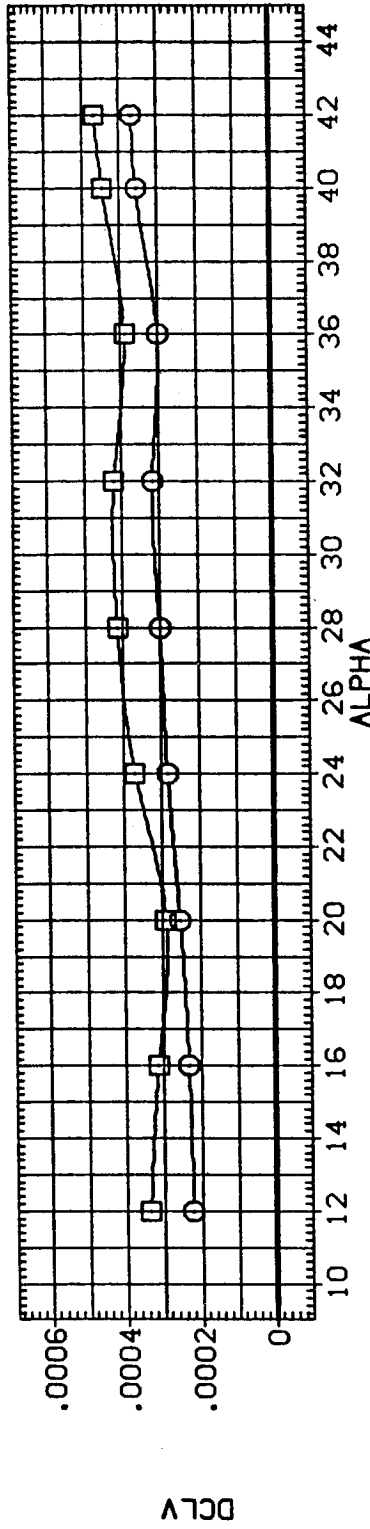
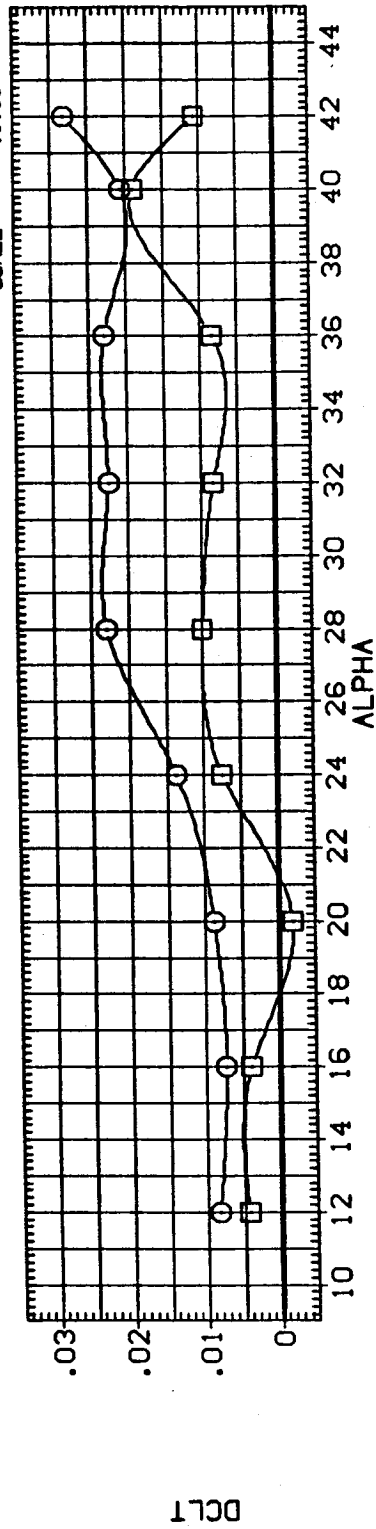


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (ZE0009) (ZE0017)

CONFIGURATION DESCRIPTION

AMES 3.5-190 0A98 (011-M7+M14-N24)  
AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDRBK 55.000 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.X0  
XMRP 1076.7000 IN.Y0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

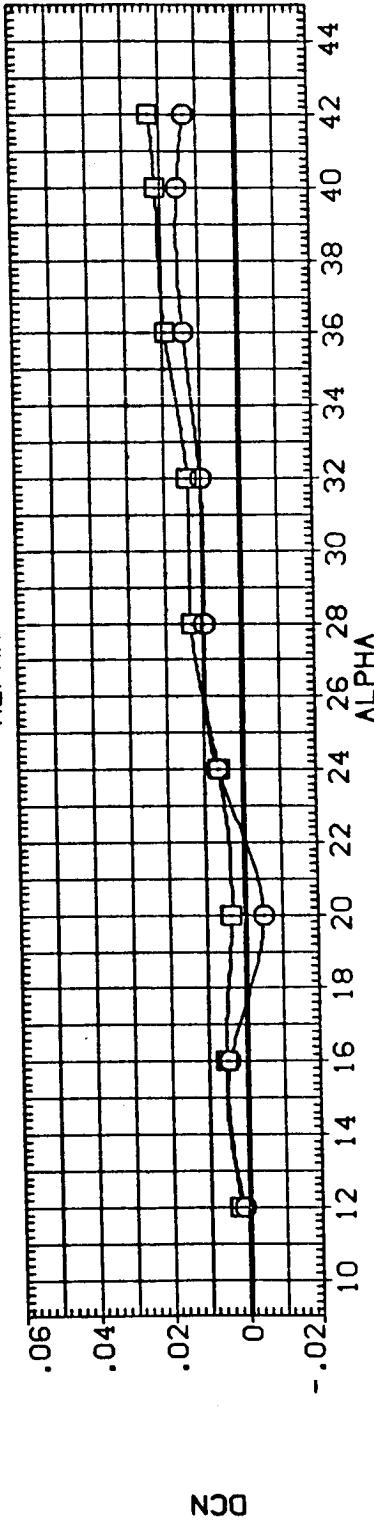
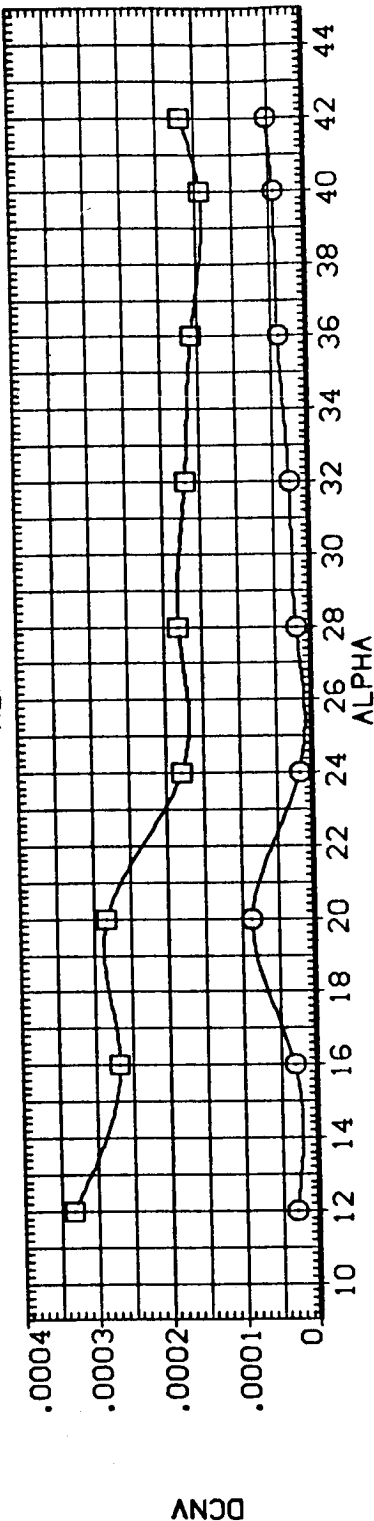
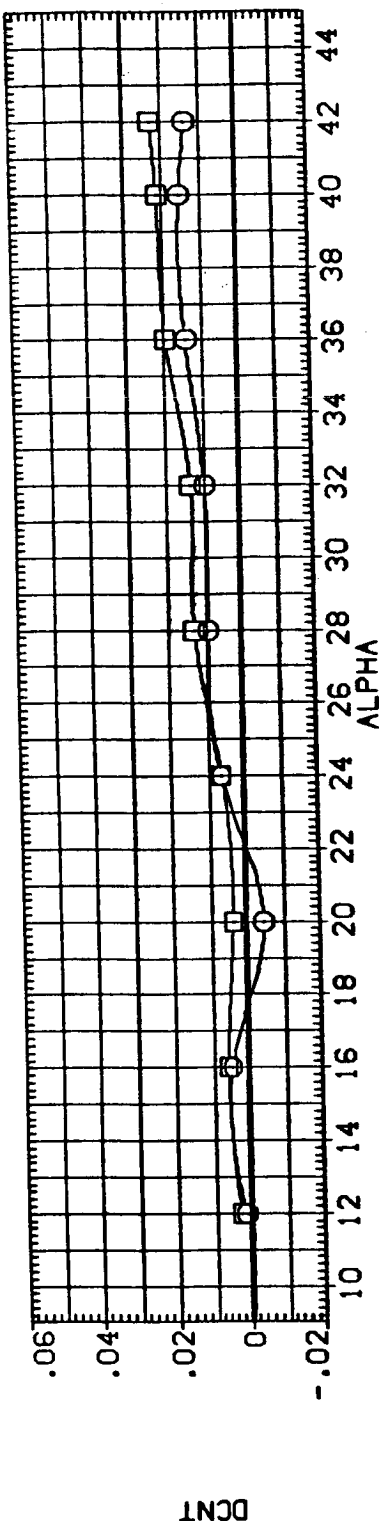


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (ZE0009) (ZE0017)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-47-M14-N24)  
 AMES 3.5-190 0A98 (011-47-M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 55.000 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 50.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

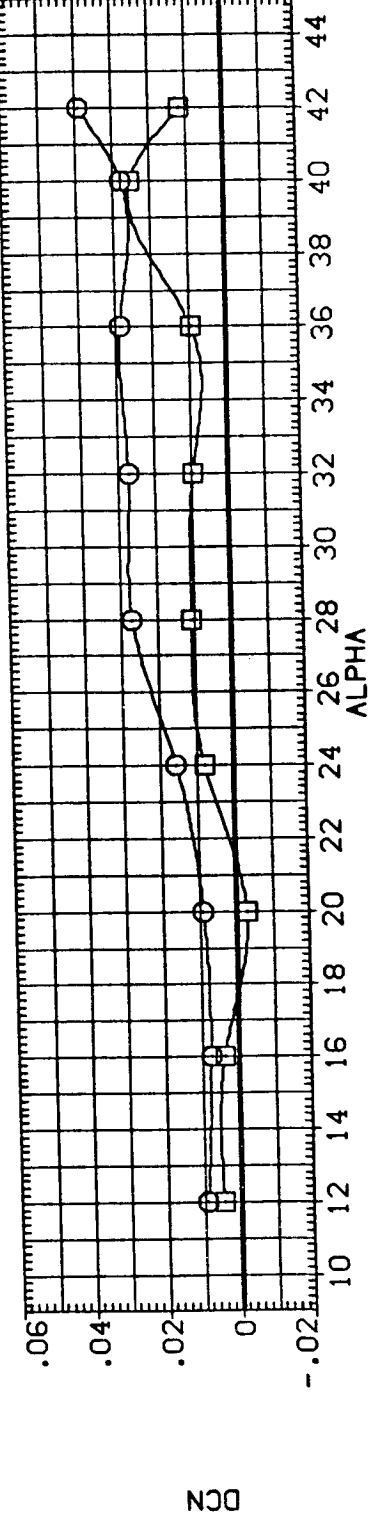
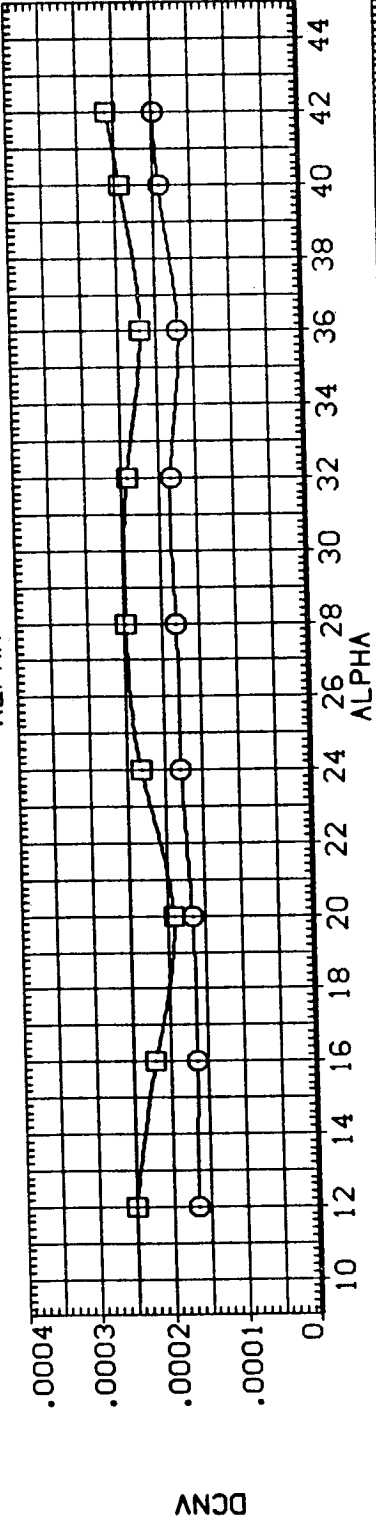
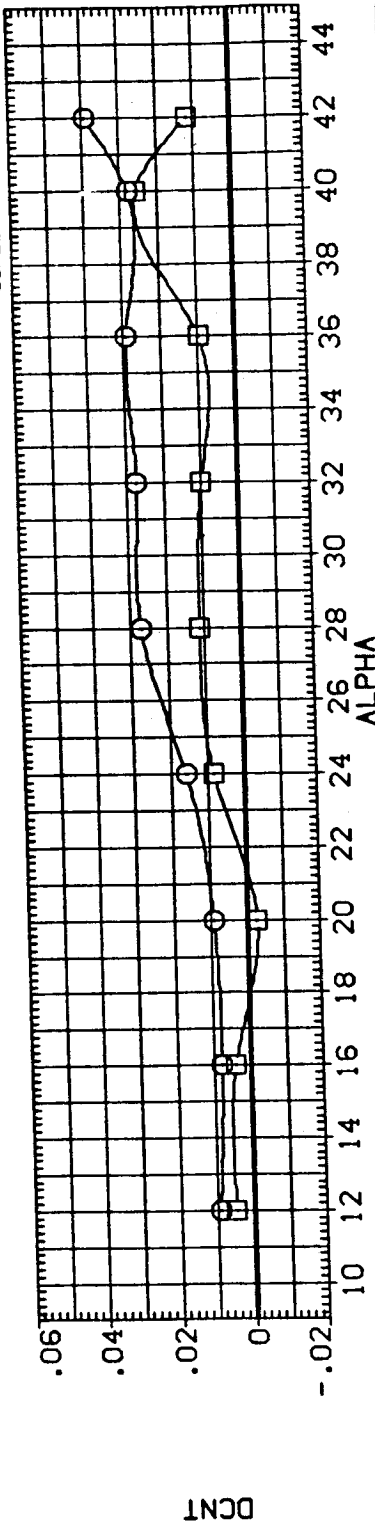


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL  
(ZE0009)  
(ZE0017)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 OAS8 (011-M7+M14-N24)  
AMES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPDRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.  
YMRP .0000 IN.  
ZMRP 375.0000 IN.  
SCALE .0150

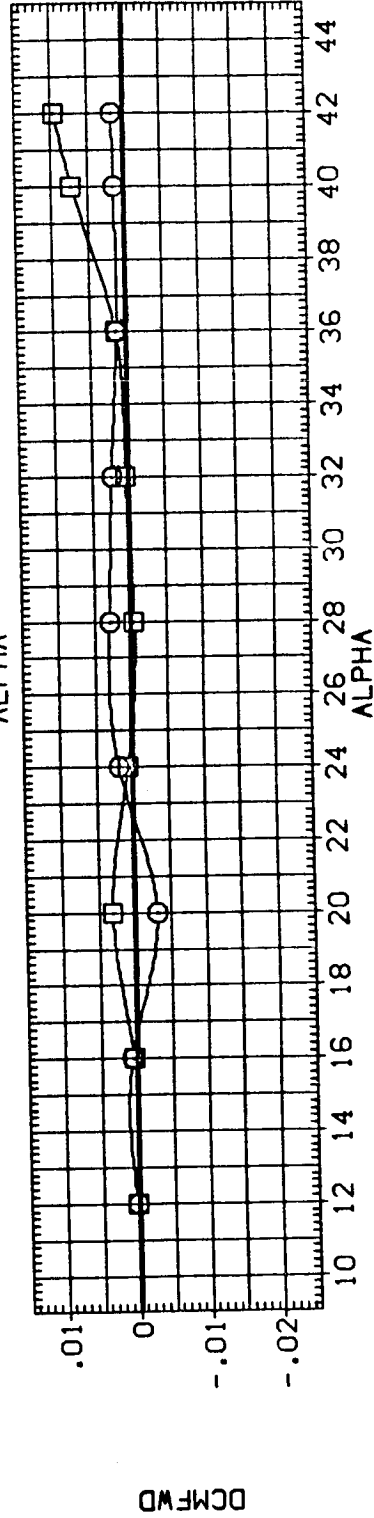
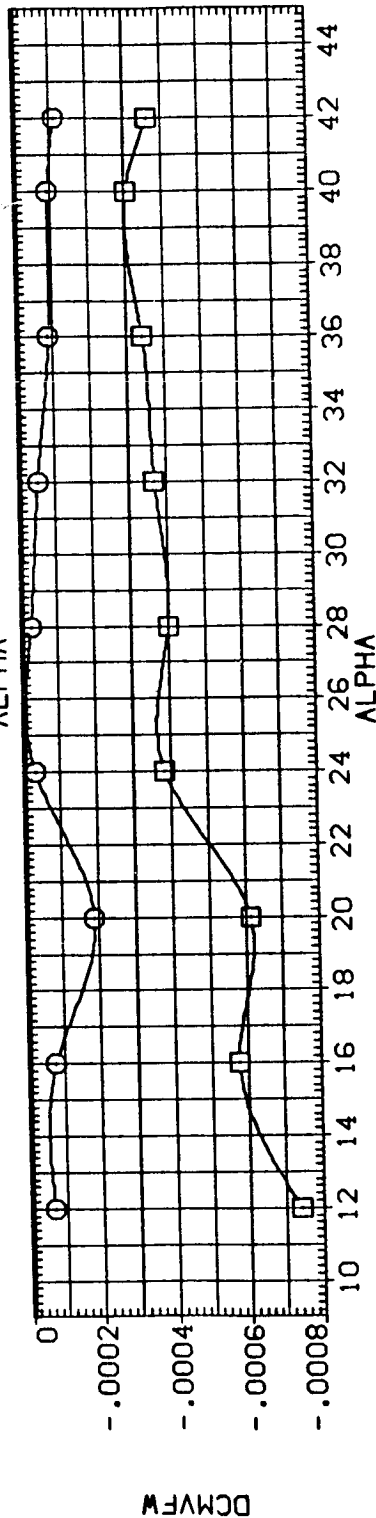
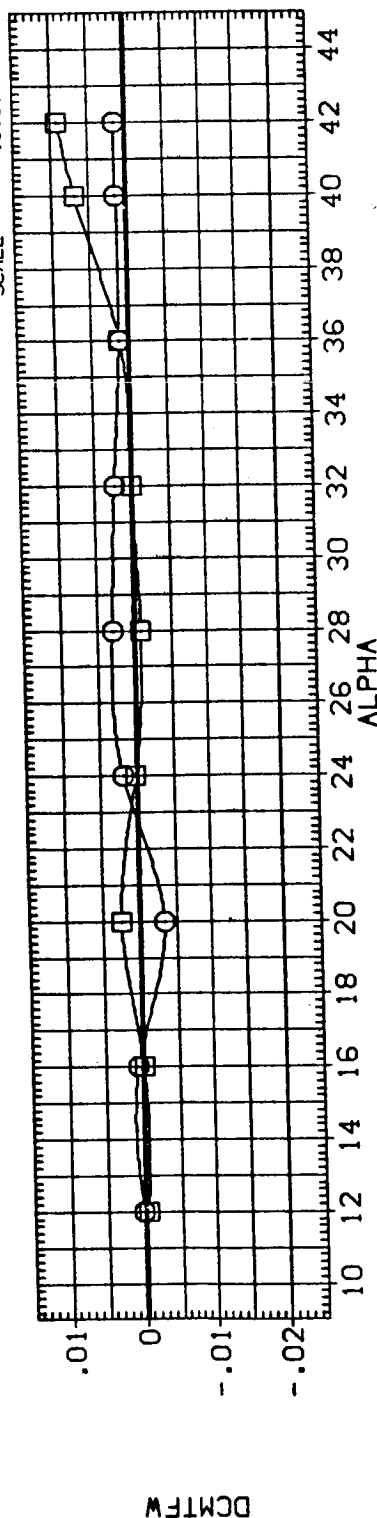


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 5.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(ZE0009)	AMES 3.5-190 0A98 (011-M7+H14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(ZE0017)	AMES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

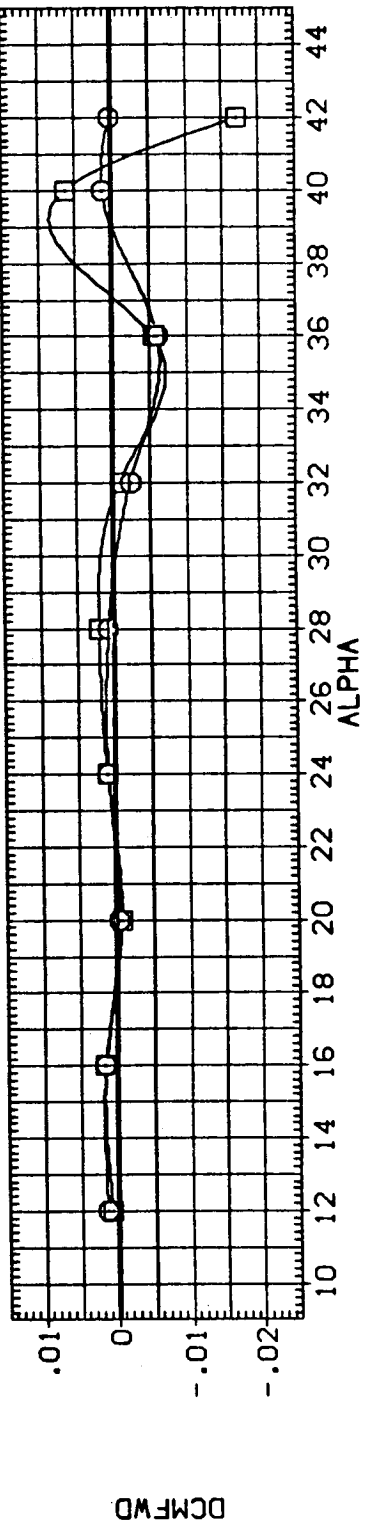
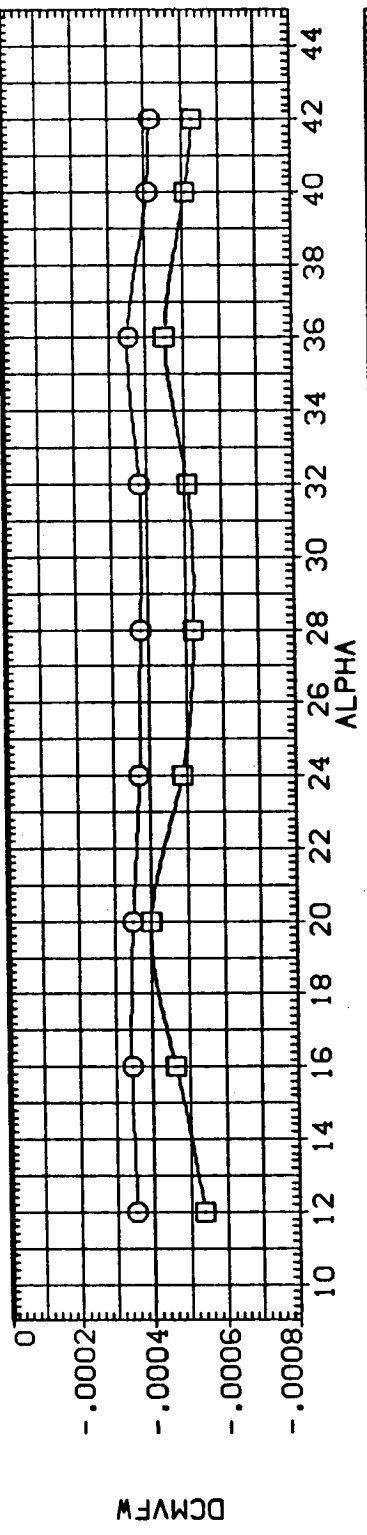
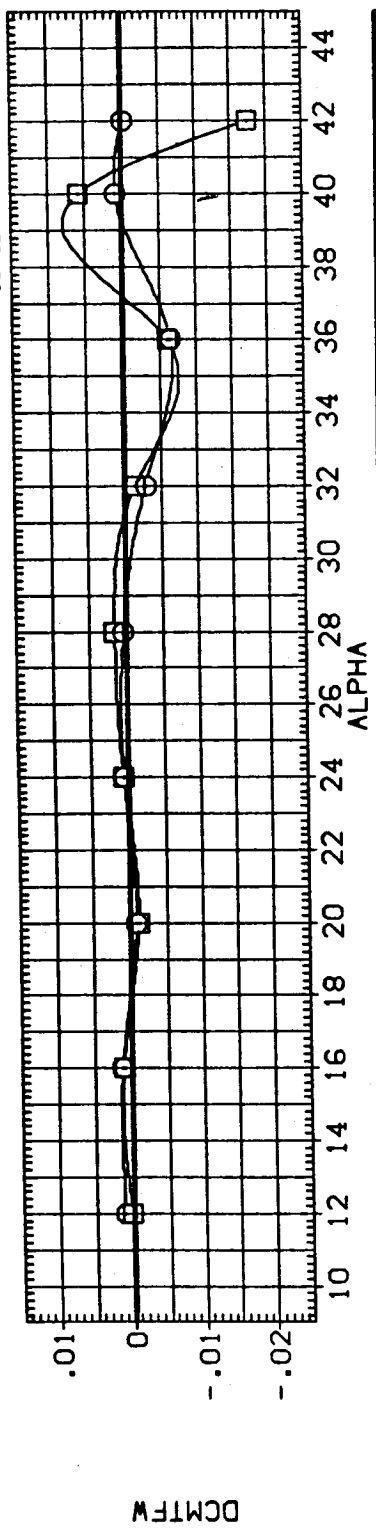


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL  
(ZE0009)  
(ZE0017)

CONFIGURATION DESCRIPTION  
AVES 3.5-190 0A98 (011-M7-M14-N24)  
AVES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPOBRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.XG  
YMRP .0000 IN.YG  
ZMRP 375.0000 IN.ZG  
SCALE .0150

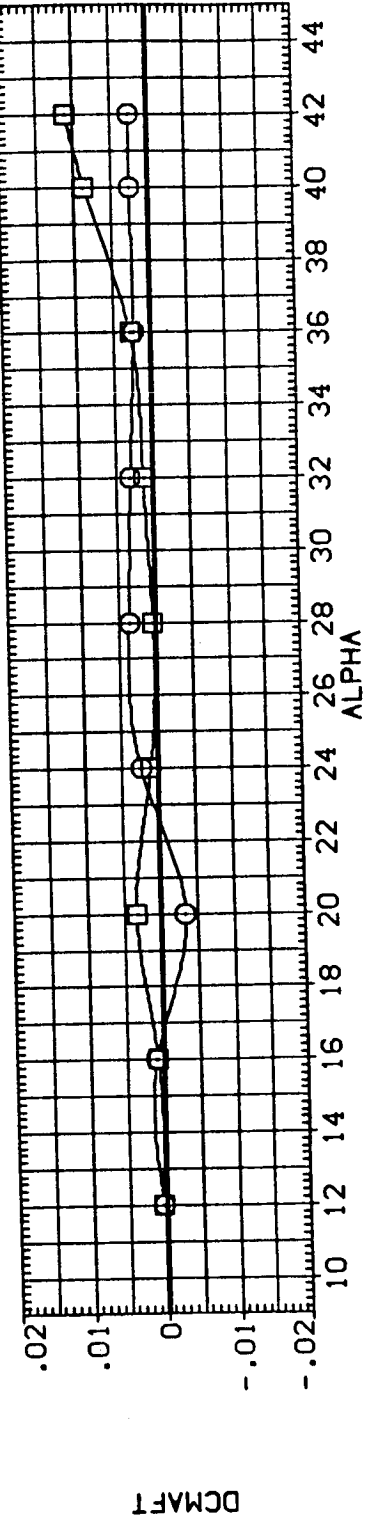
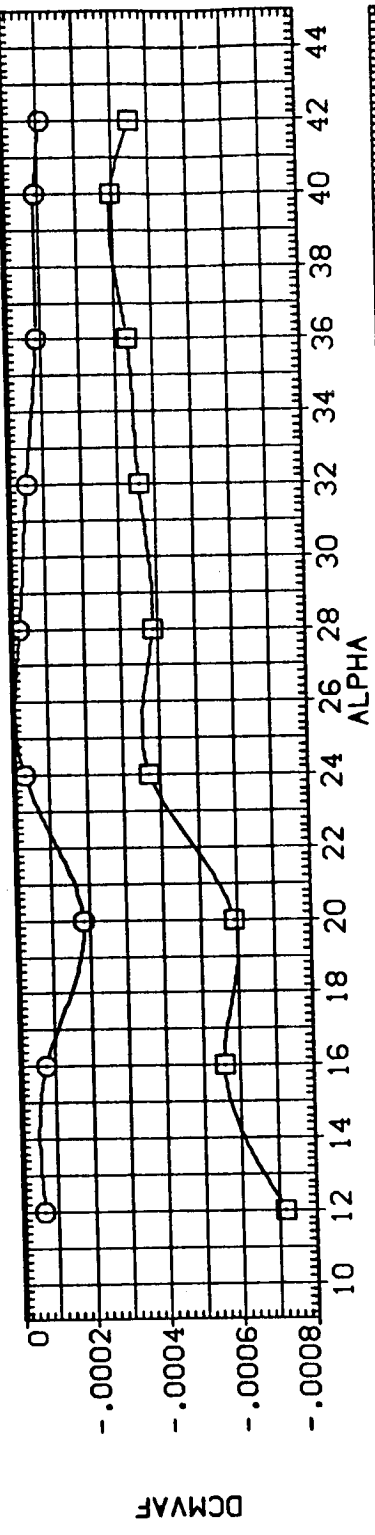
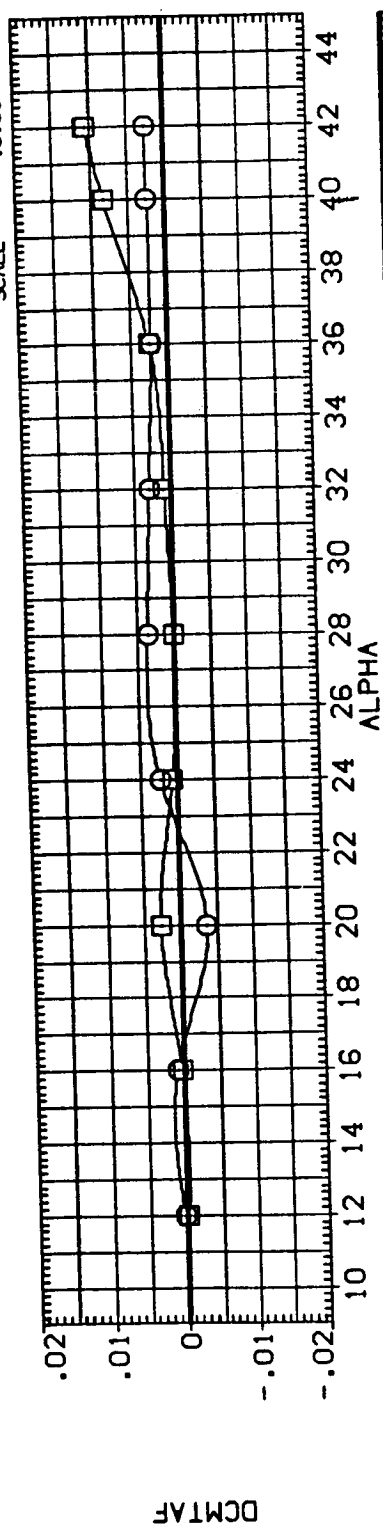


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(ZE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(ZE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

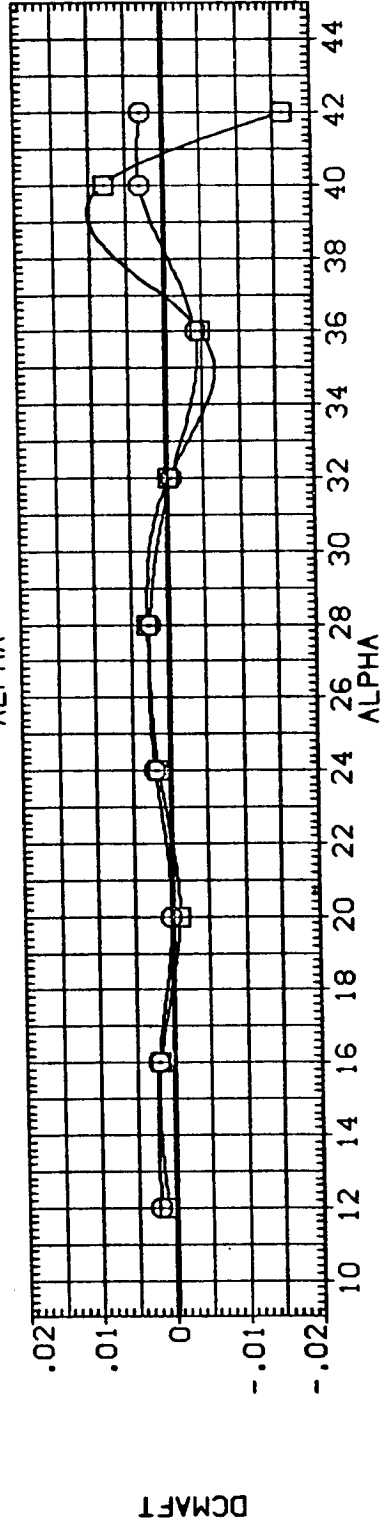
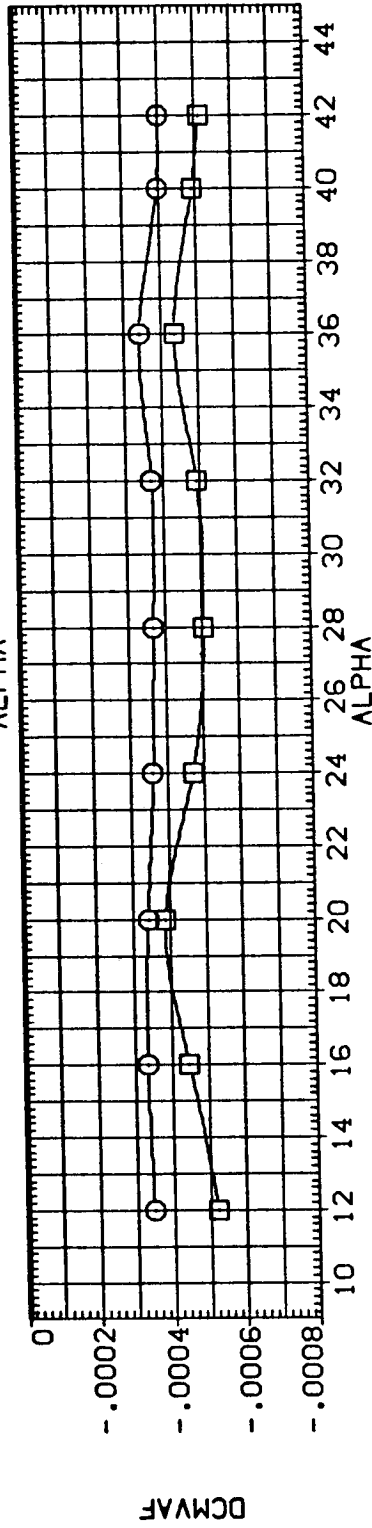
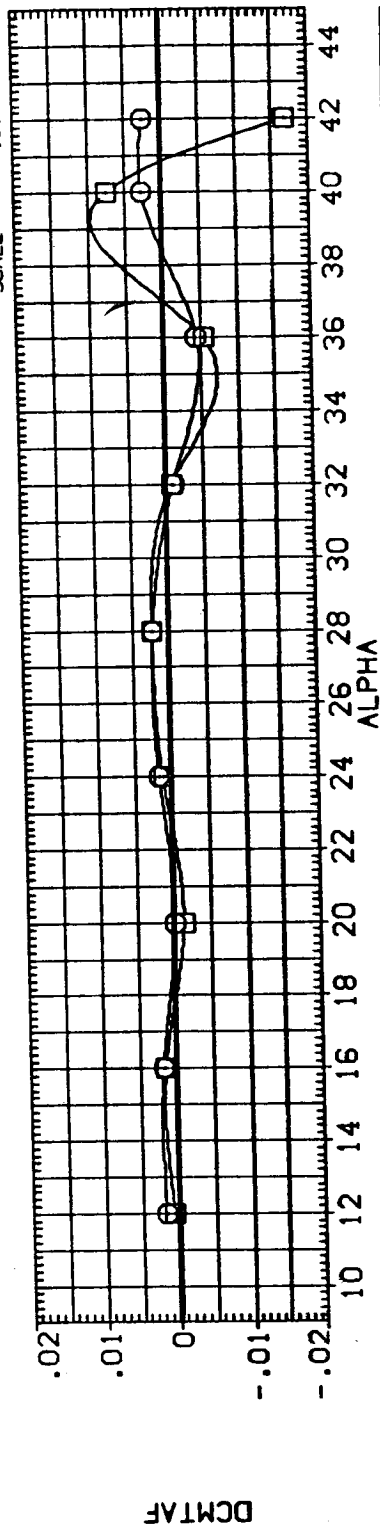


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL  
(1E0009)  
(1E0017)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7+M14-N24)  
AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPOBRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

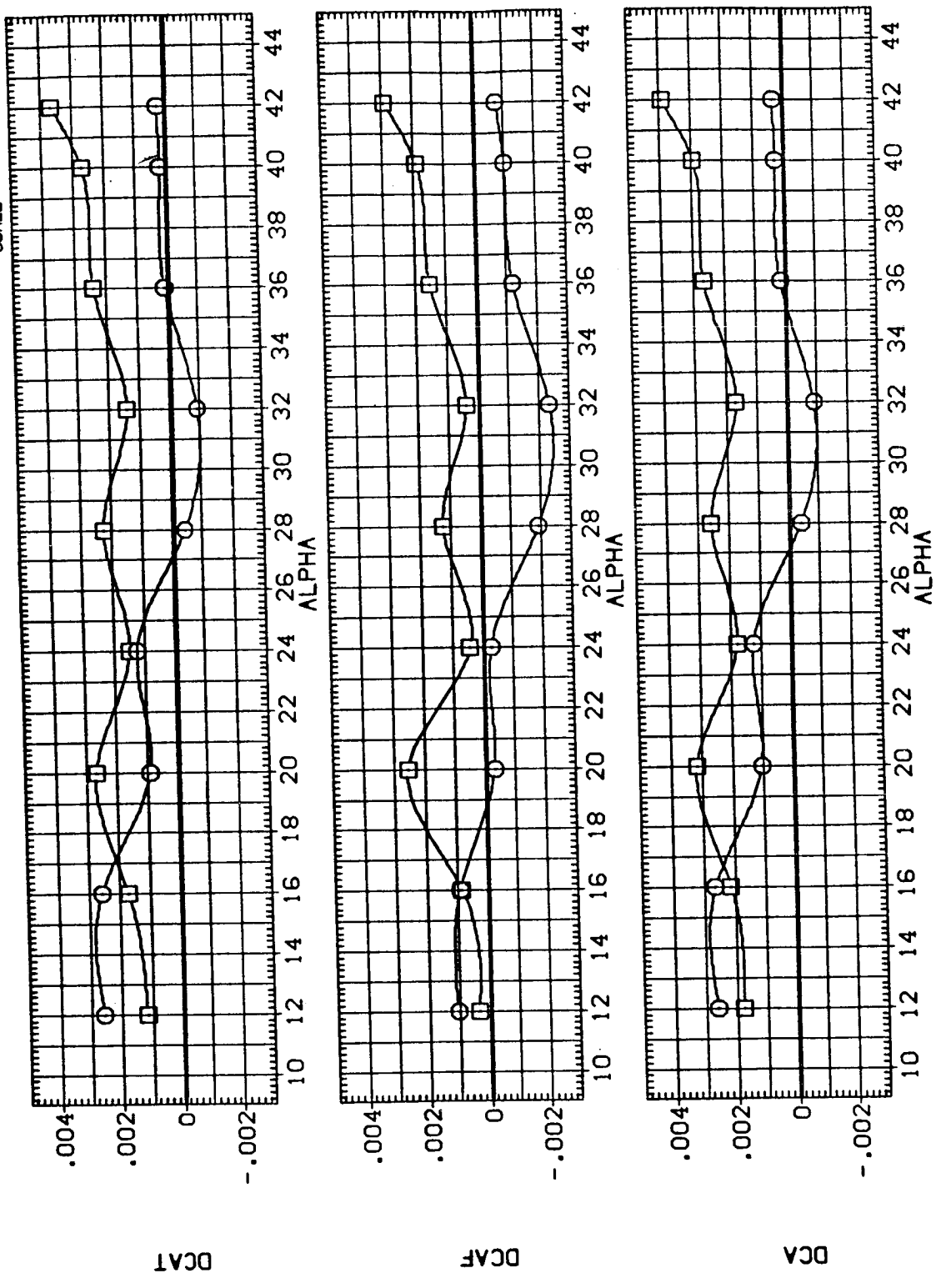



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (1EQ009) (1EQ017)  CONFIGURATION DESCRIPTION AMES 3.5-190 OA98 (011-H7+M14-N24) AMES 3.5-190 OA98 (011-H7+M14-N24+DUMMY STING) REFERENCE INFORMATION SREF 2690.0000 SQ.FT. IN. LREF 474.8000 IN. BREF 936.6800 IN. X0 YMRP 1076.7000 IN. X0 YMRP 0.0000 IN. Y0 ZMRP 375.0000 IN. Z0 SCALE .0150

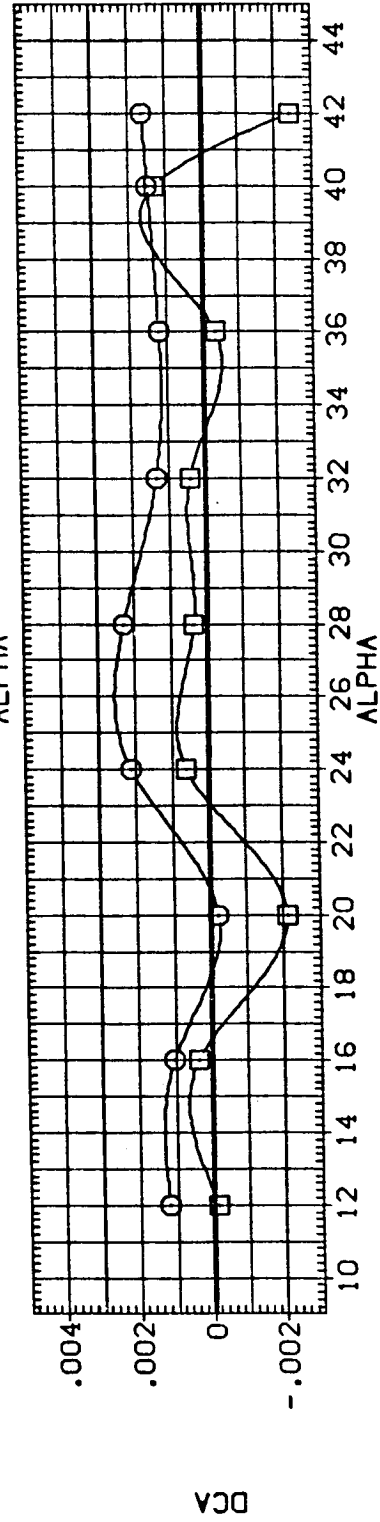
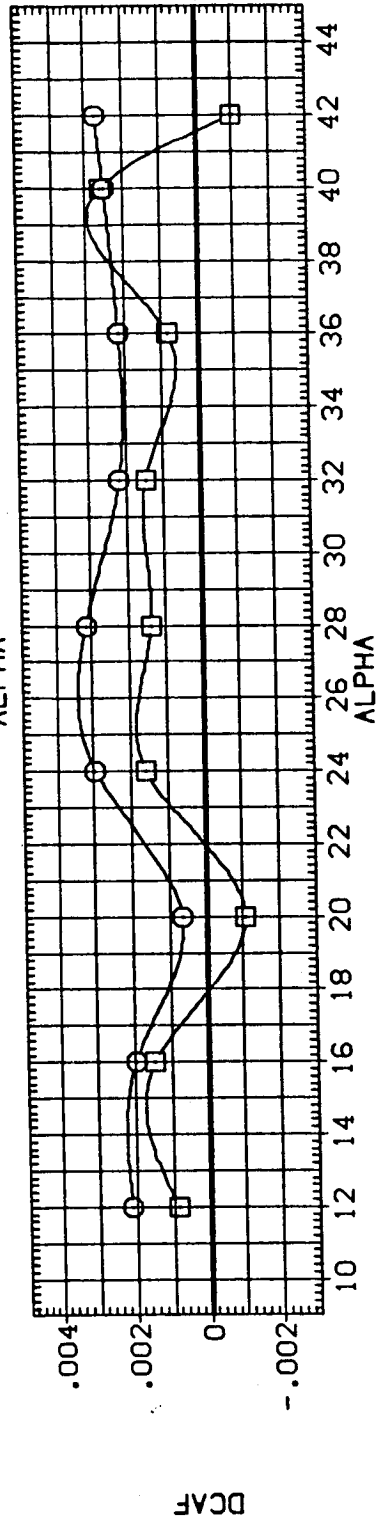
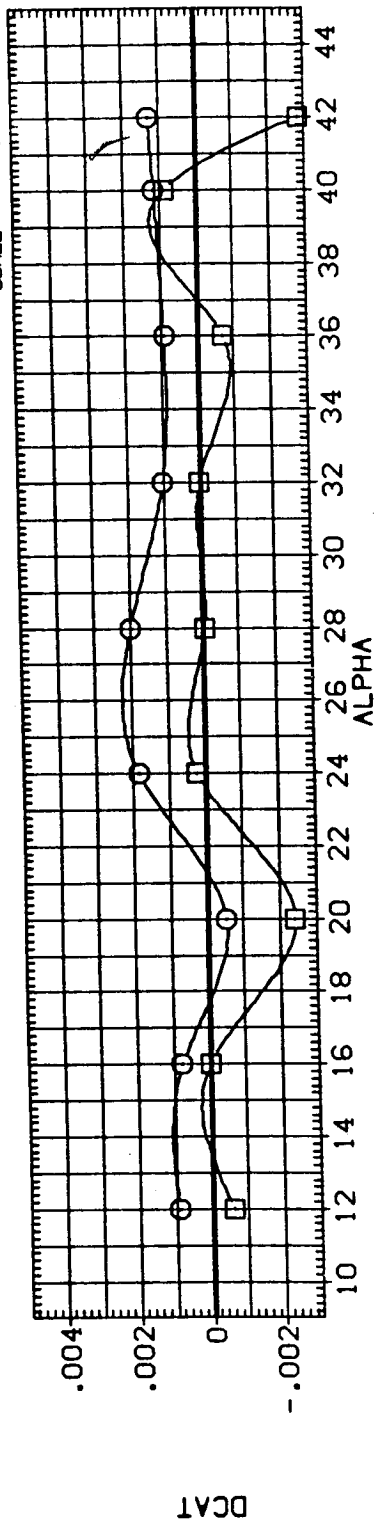


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL  
(1E0009)  
(1E0017)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7-M14-N24)  
AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA  
.000  
.000

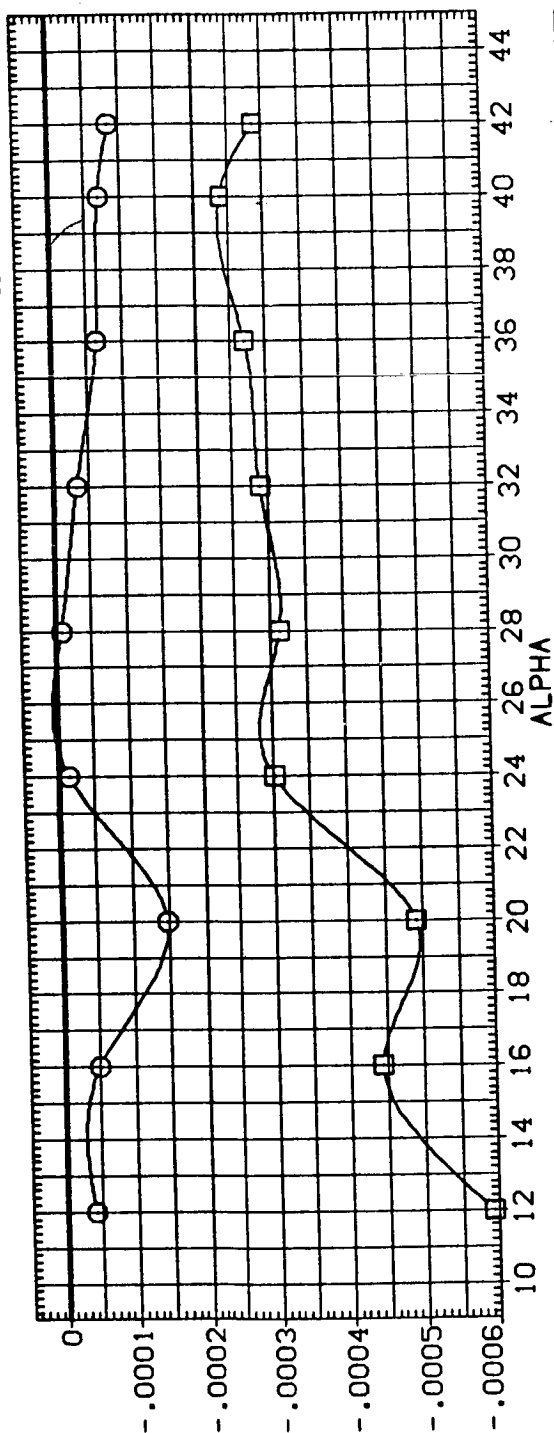
ELEVON  
.000  
.000

BOELAP  
-11.700  
-11.700

SPOBRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 50.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.X0  
YMRP 1076.7000 IN.Y0  
ZMRP .0000 IN.Z0  
SCALE .0150

DCAV



DCAB

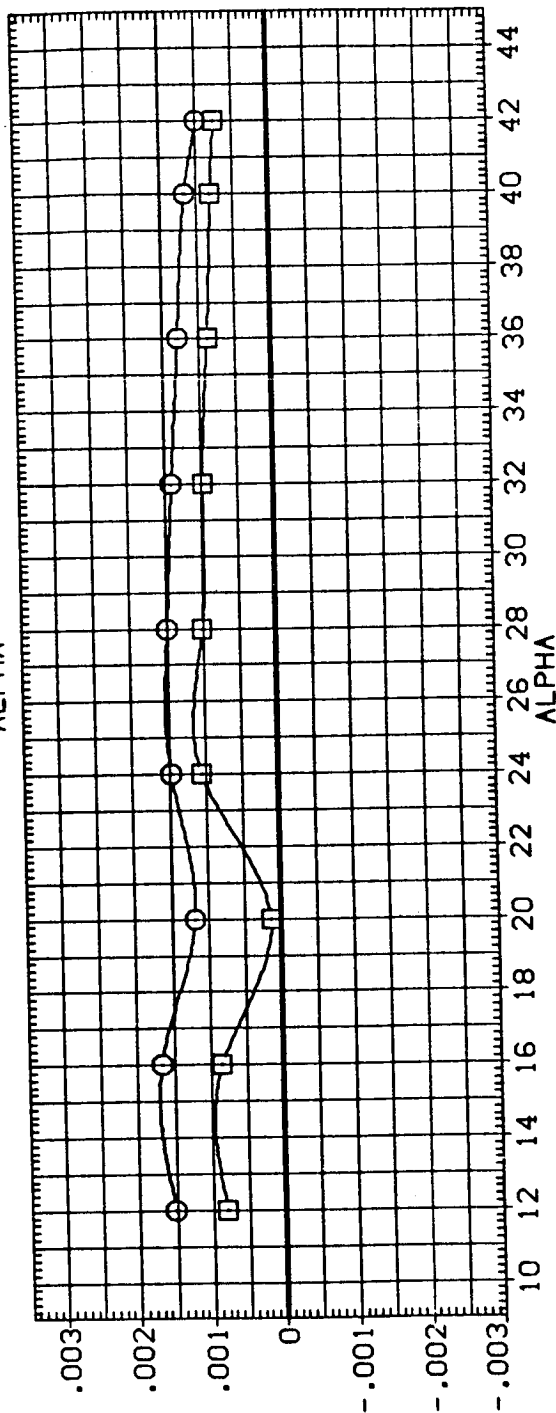


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(YEQ009)	AVES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(YEQ017)	AVES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.8900 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

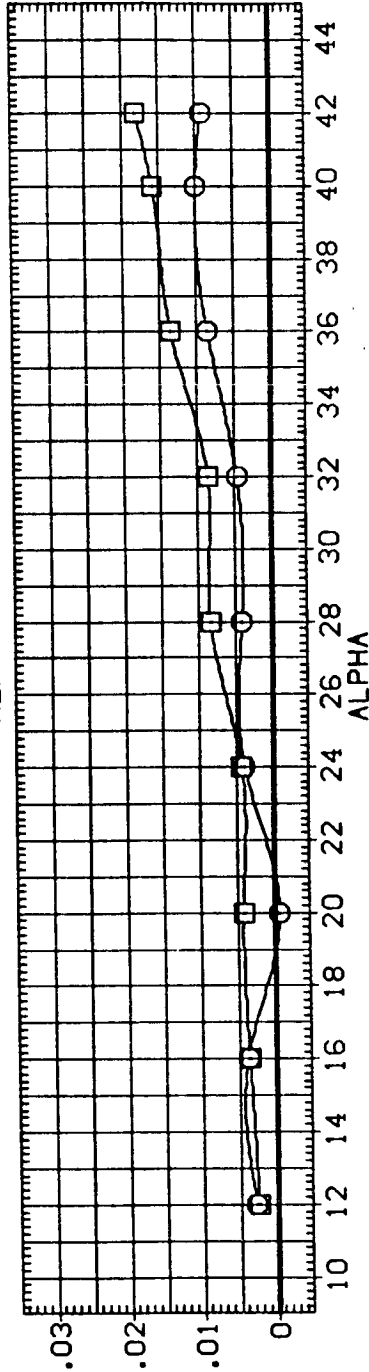
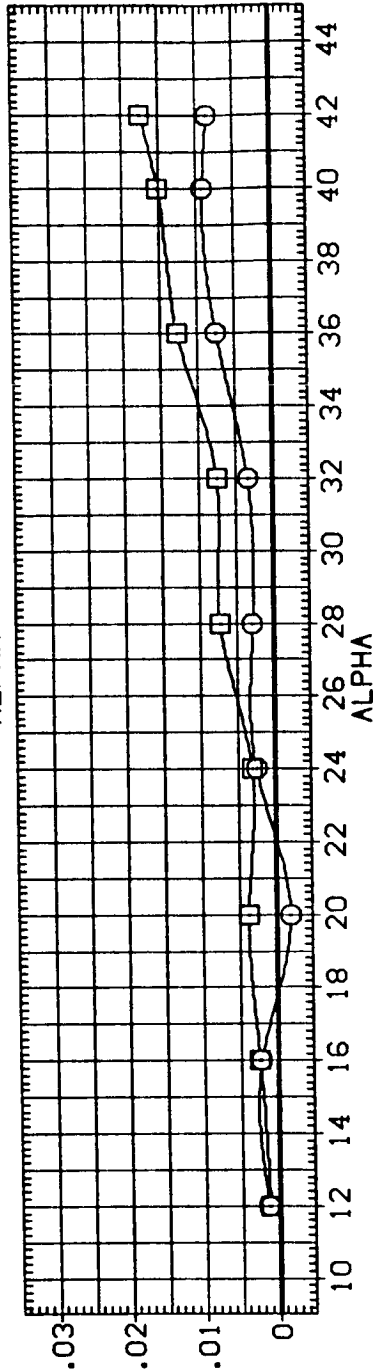
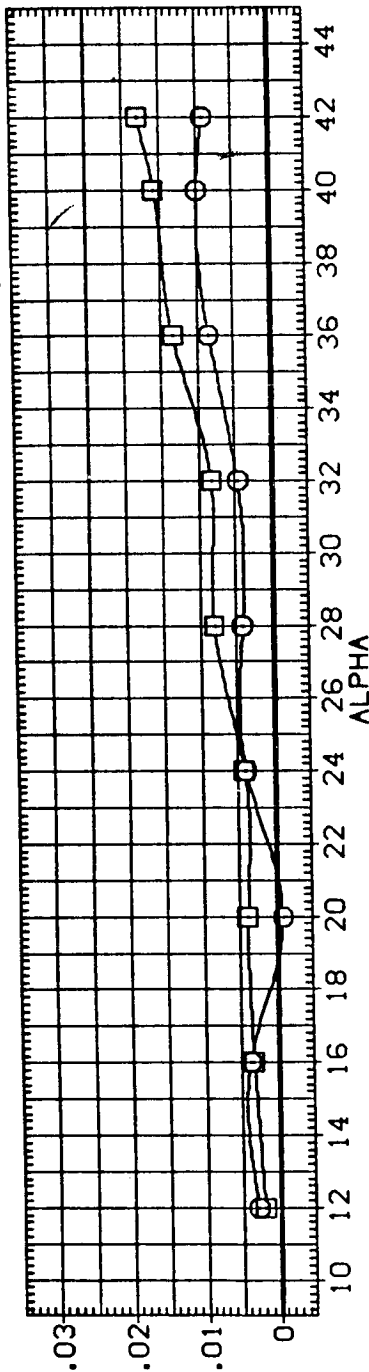


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(YEQ009)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 50. FT.
(YEQ017)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

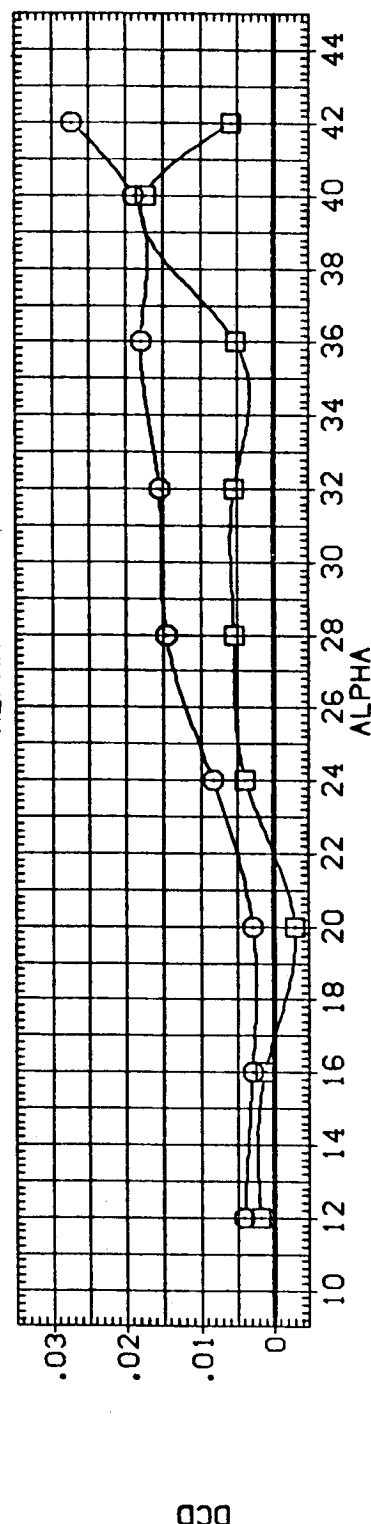
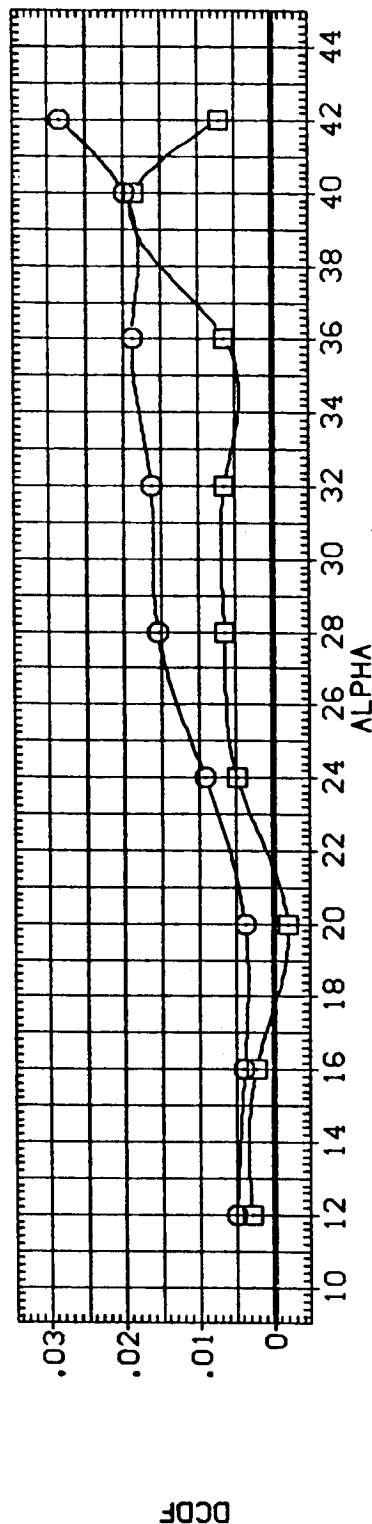
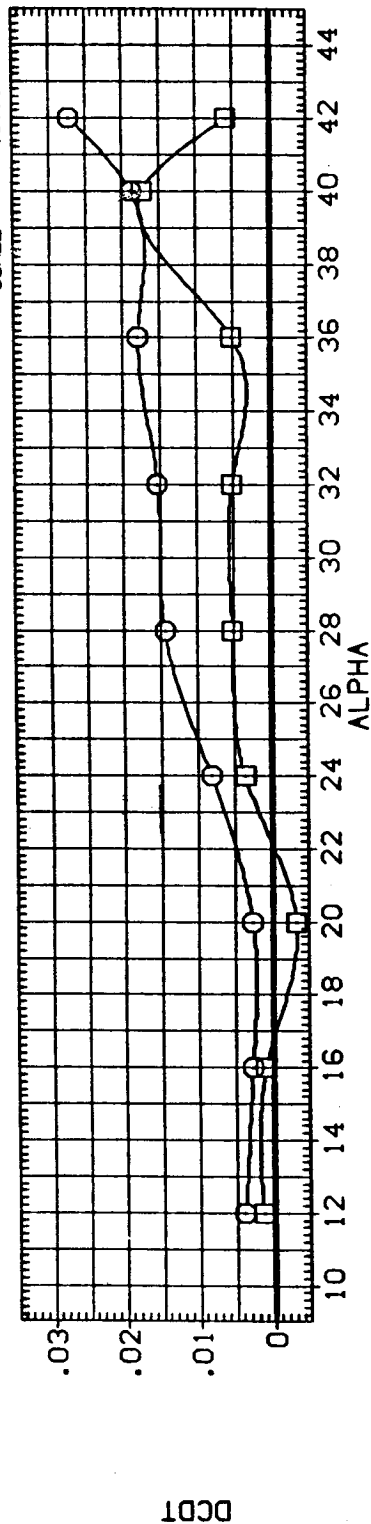


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(YEQ009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(YEQ017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

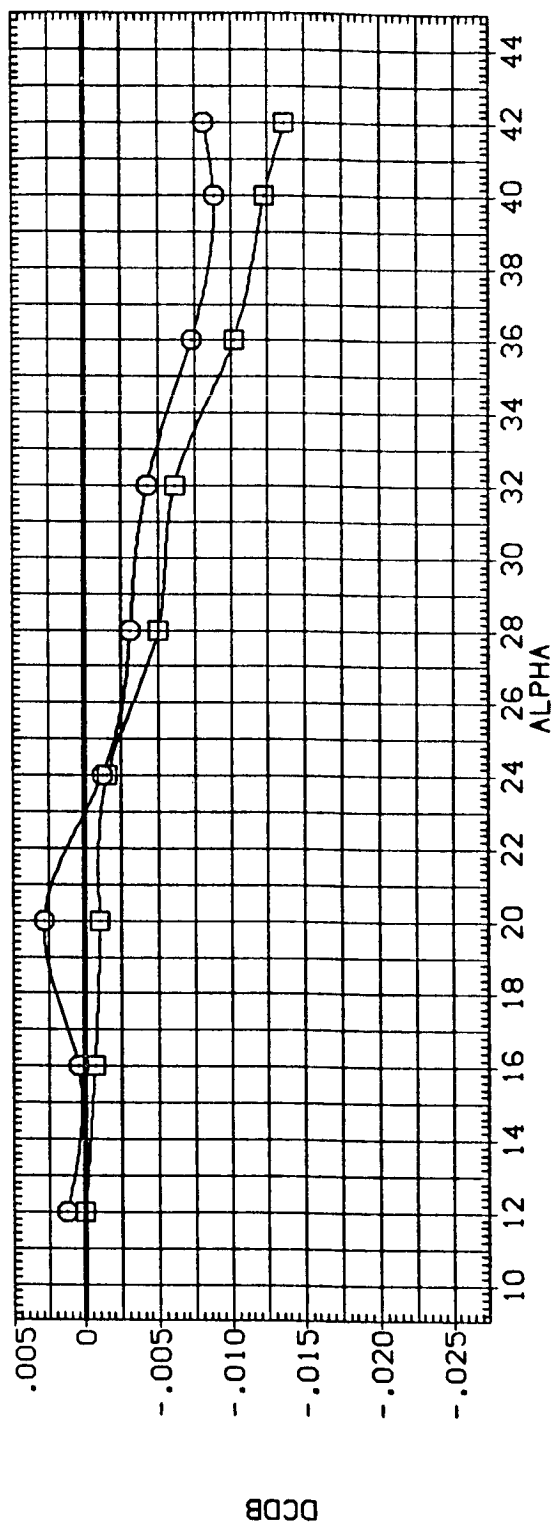
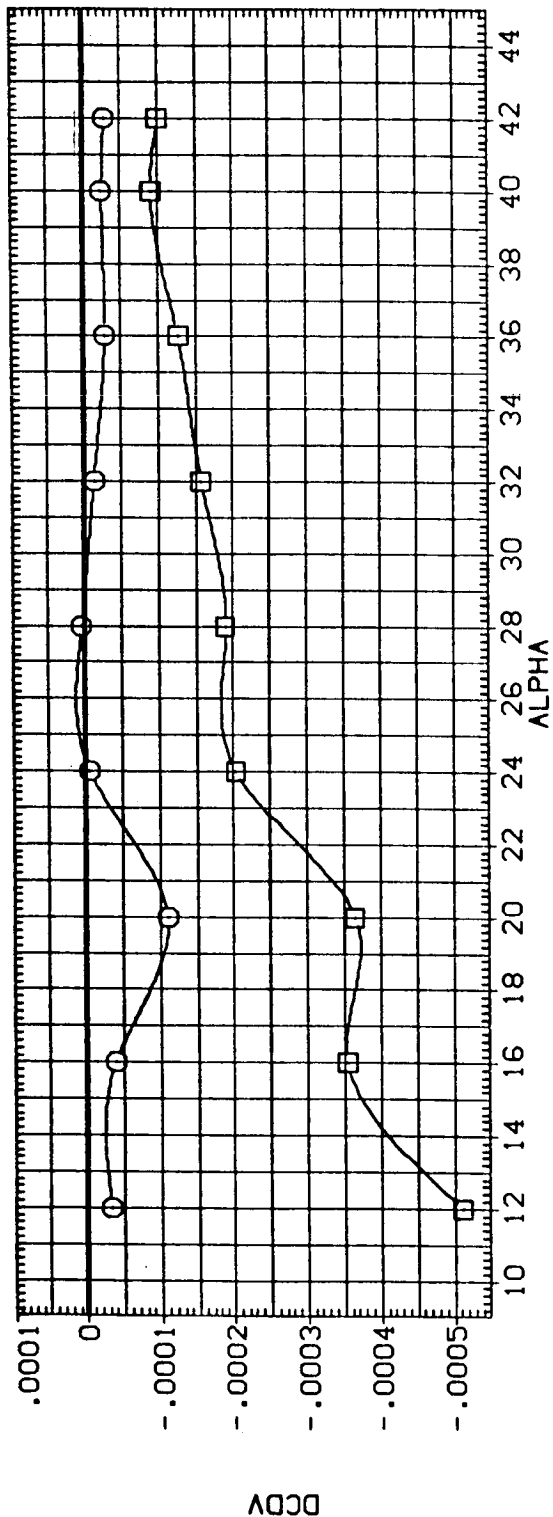


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30



DATA SET SYMBOL: (YEQ009) (YEQ017)

CONFIGURATION DESCRIPTION: AMES 3.5-190 0A98 (011-M7+M14-N24) AMES 3.5-190 0A98 (011-M7+M14-N24+JUMMY STING)

BETA: .000 .000

ELEVON: .000 .000

BOFLAP: -11.700 -11.700

SPOBRK: 55.000 55.000

REFERENCE INFORMATION:

	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE	SQ.FT.
	2690.0000	474.8000	936.6800	1076.7000	.0000	.0000	.0150	IN.
								IN. X0
								IN. Y0
								IN. Z0

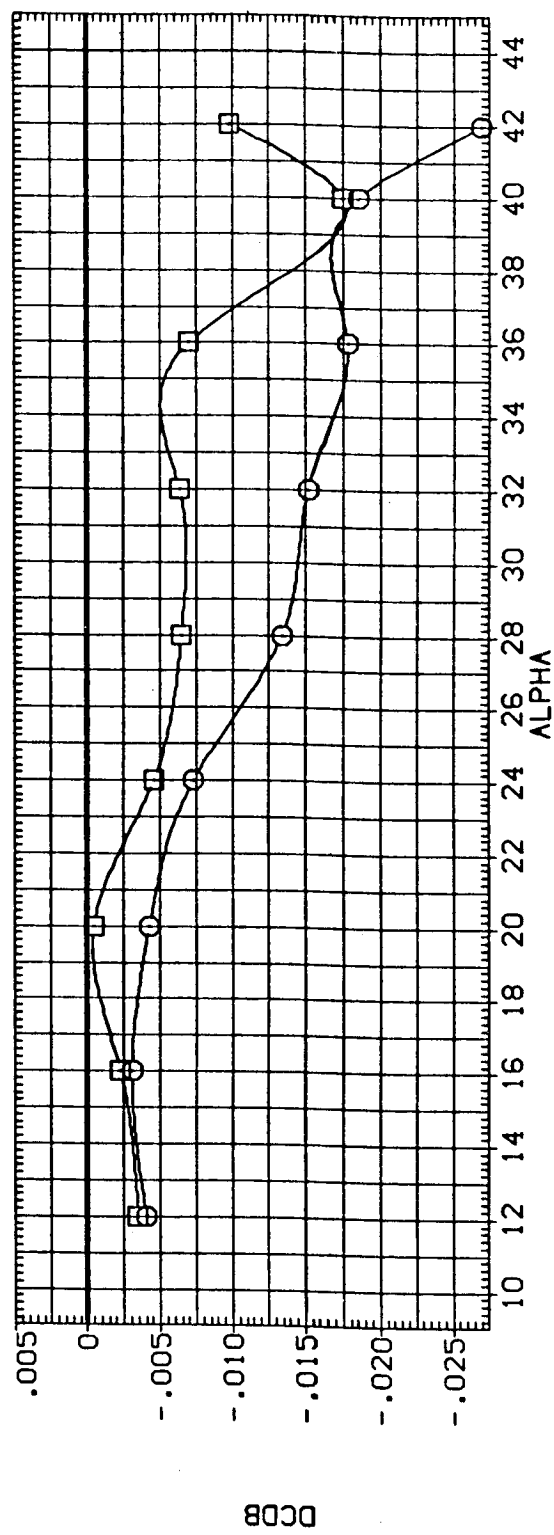
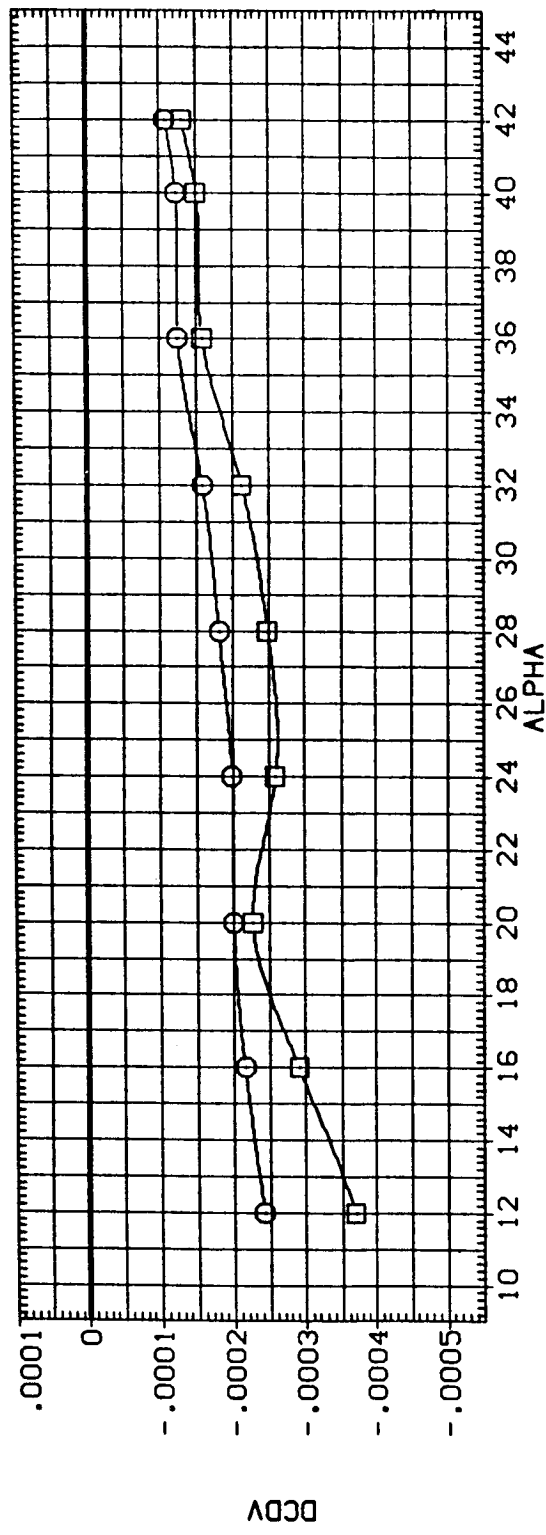


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL: (AE0001) (AE0008) (AE0017)

CONFIGURATION DESCRIPTION: AMES 3.5-190 0A98 (011-M7+M14) AMES 3.5-190 0A98 (011-M7+M14-N24) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA: .000 .000 .000

ELEVON: .000 .000 .000

BOFLAP: -11.700 -11.700 -11.700

SPOBRK: 55.000 55.000 55.000

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.6000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.X0 YMRP .0000 IN.Y0 ZMRP 375.0000 IN.Z0 SCALE .0150

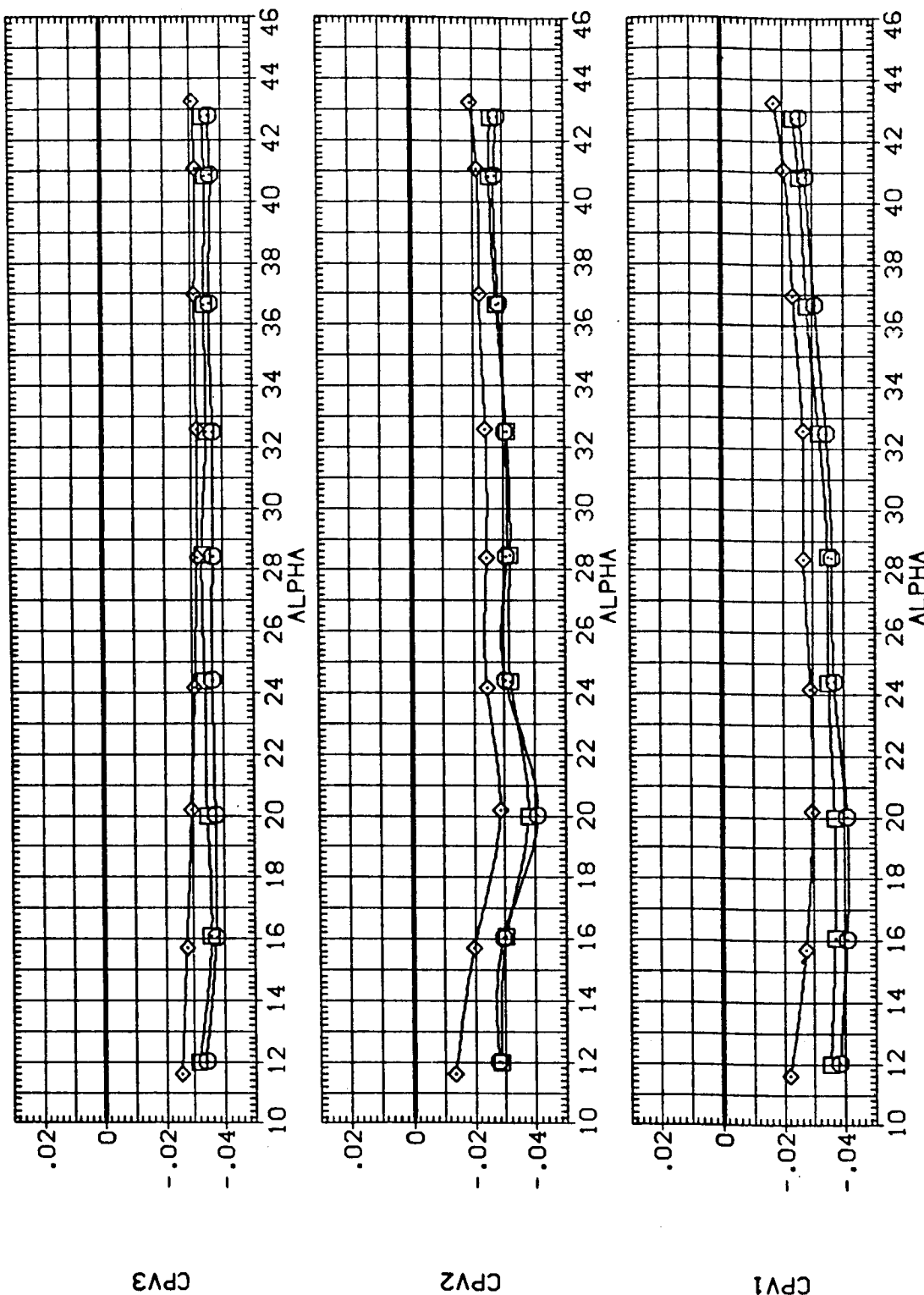


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AE0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(AE0009)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(AE0017)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

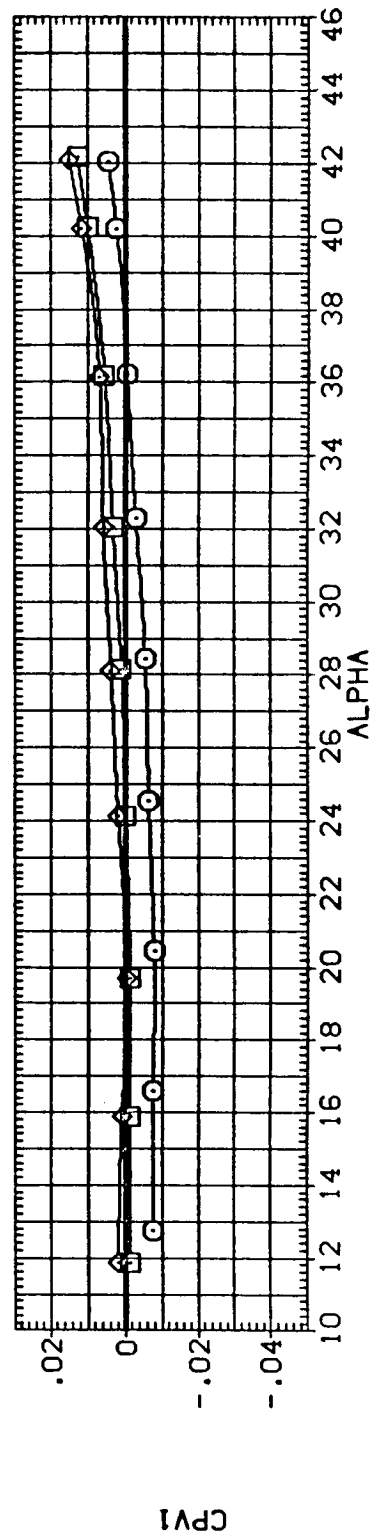
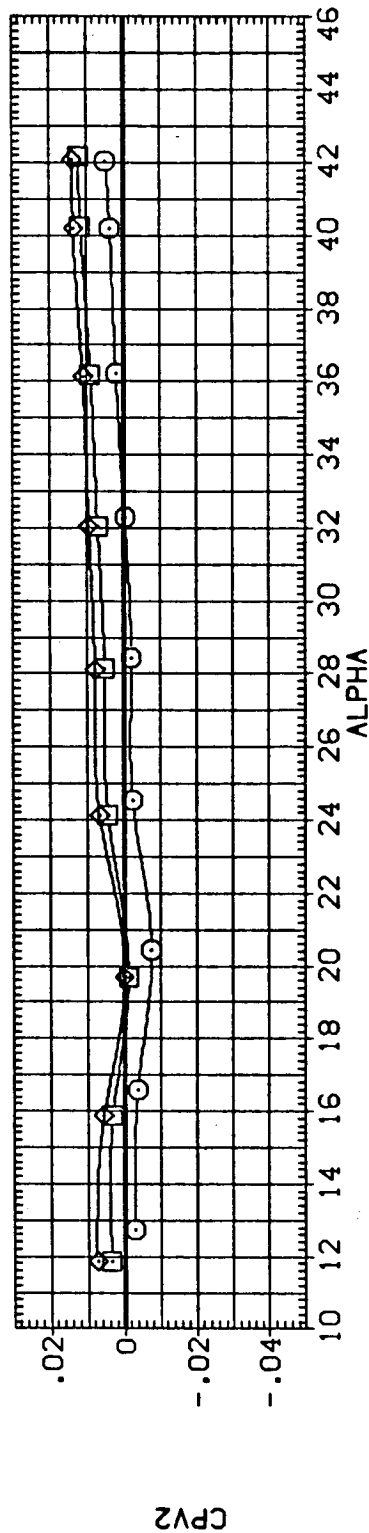
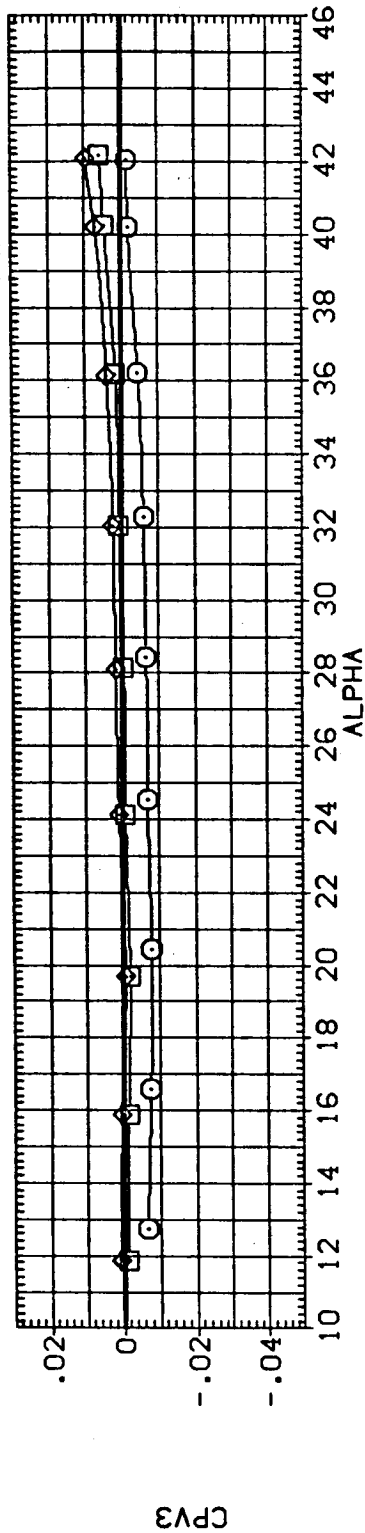


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AEG001)	AMES 3.5-190 DA98 (011-M7+M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AEG009)	AMES 3.5-190 DA98 (011-M7+M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(AEG017)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	55.000	BREF 536.6800 IN.XG
						XMRP 1076.7000 IN.YG
						ZMRP .0000 IN.ZG
						SCALE .0150

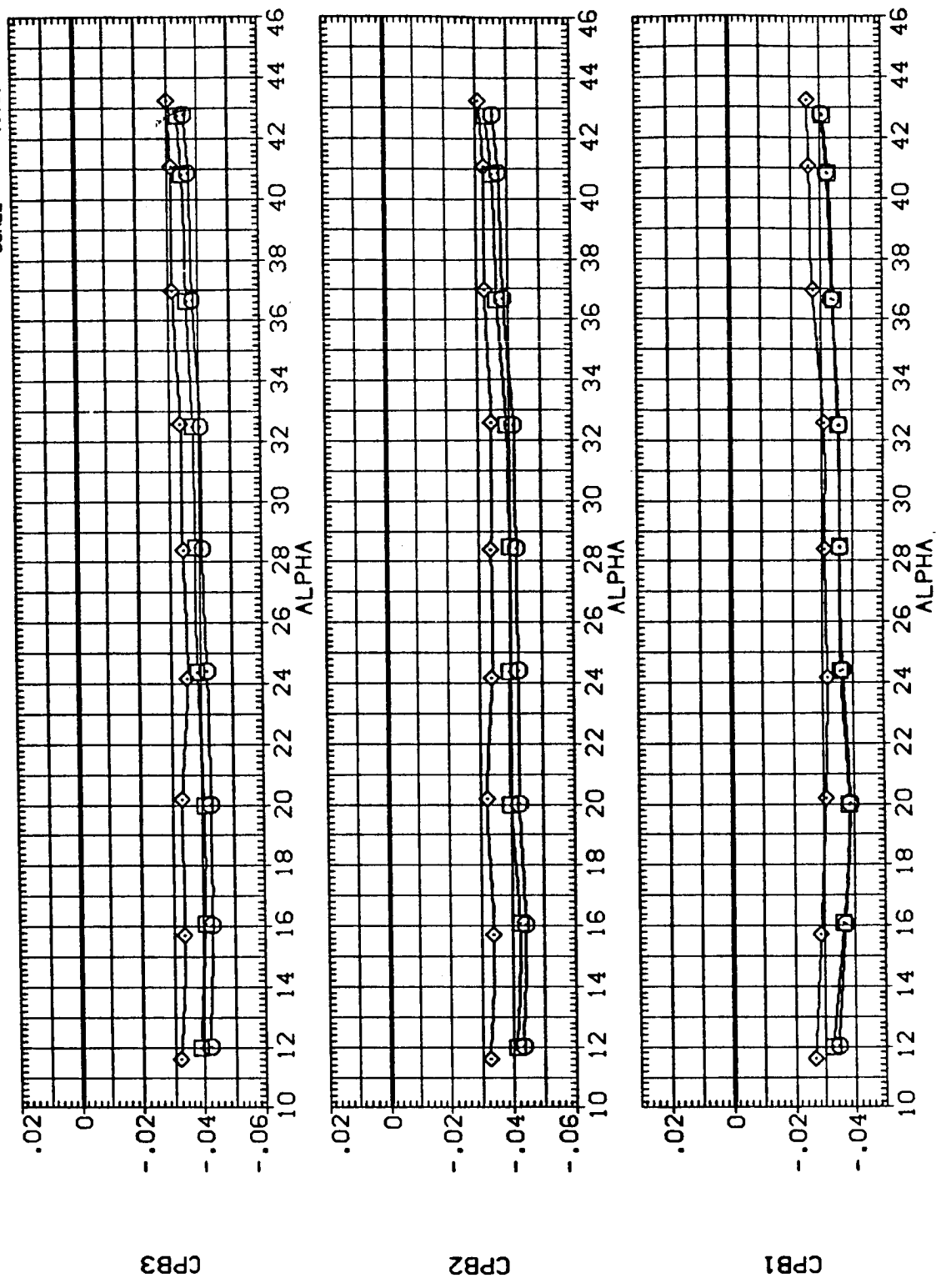


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(AEG001)	AMES 3.5-190 0A98 (011-M7-M14)	.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AEG009)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
(AEG017)	AMES 3.5-190 0A98 (011-M7-M14-N24+DJNNY STING)	.000	.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

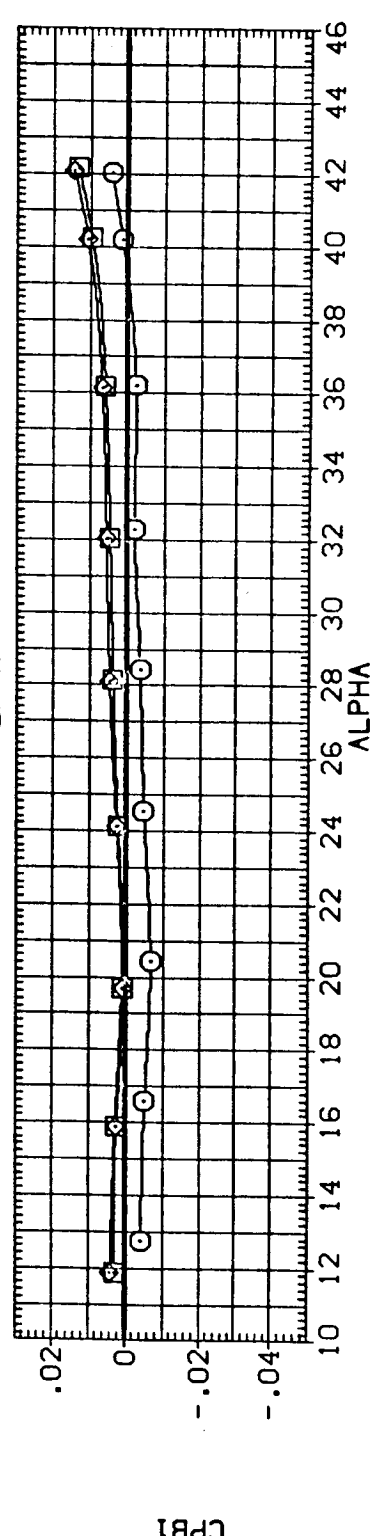
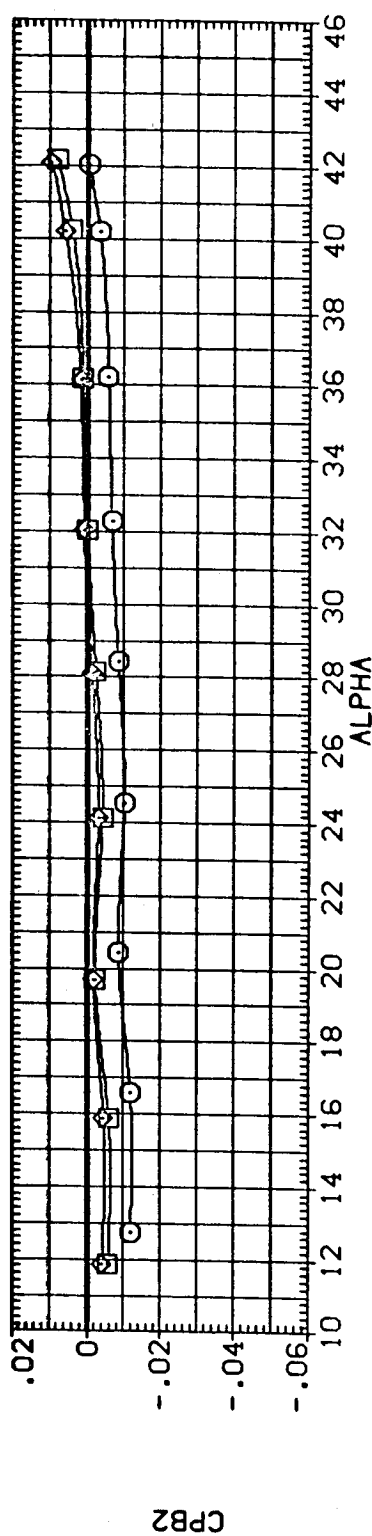
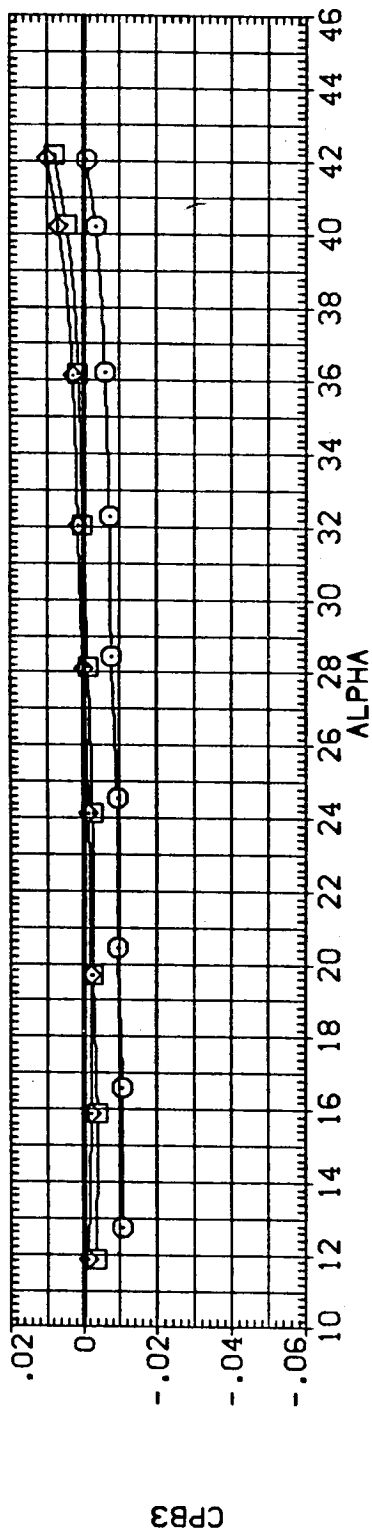


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(CE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF	2690.0000
(CE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF	474.8000
(CE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF	936.6800
						XMRP	1076.7000
						YMRP	.0000
						ZMRP	375.0000
						SCALE	.0150

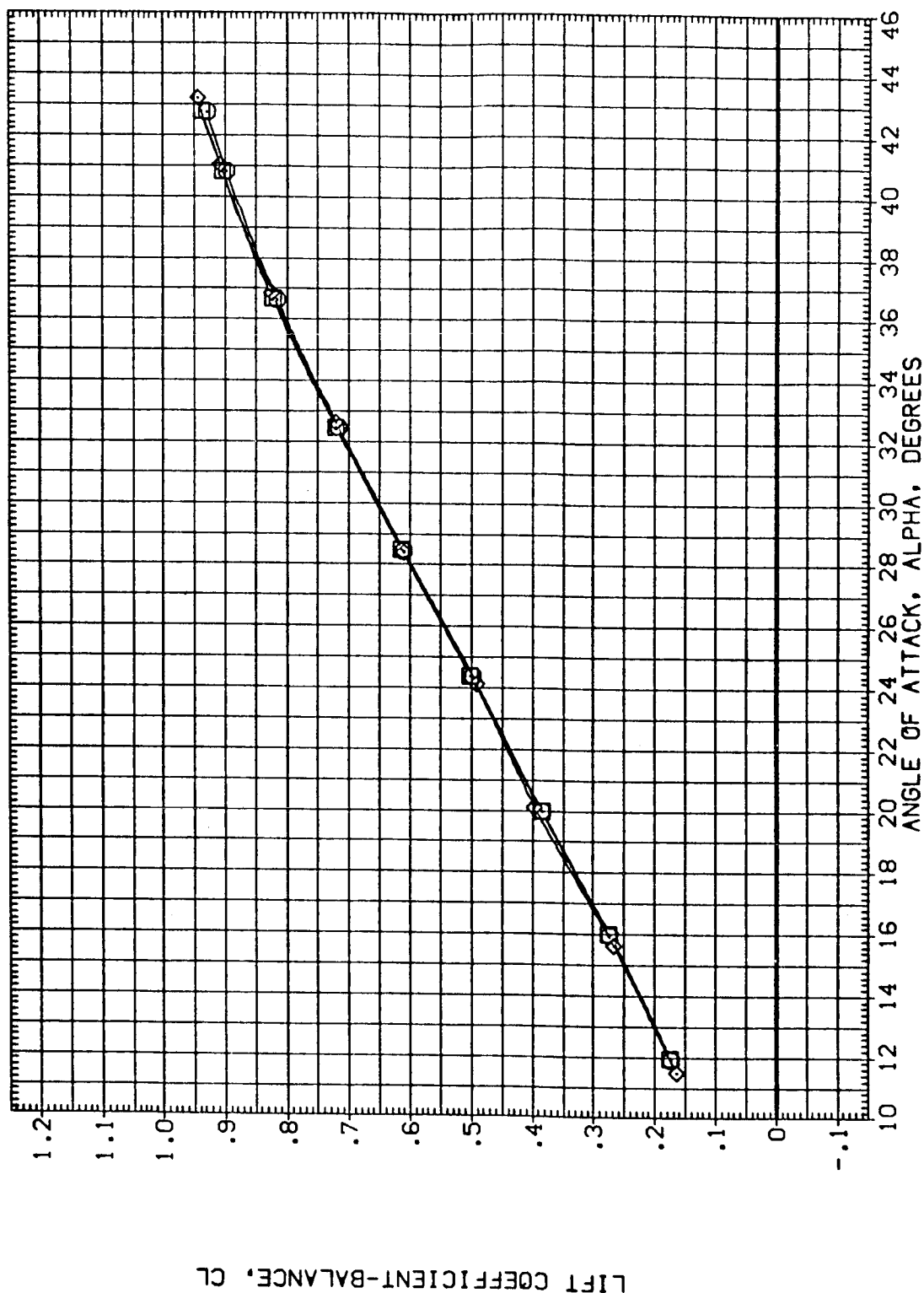


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CEQ002)	AMES 3.5-190 GA98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEQ010)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CEQ018)	AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

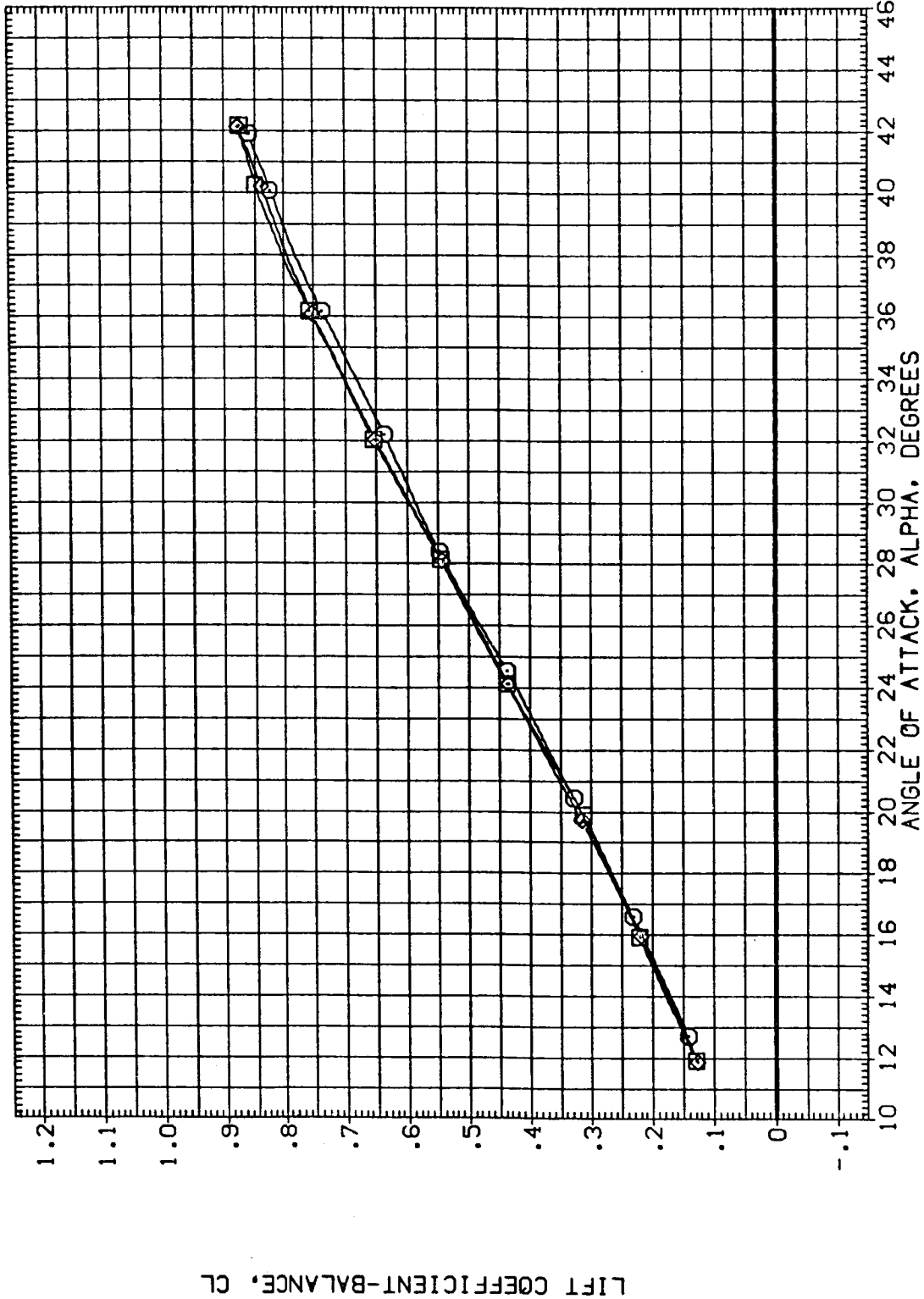


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(CE0002)  
(CE0010)  
(CE0018)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-17+M14)  
AMES 3.5-190 0A98 (011-17+M14-N24)  
AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
-10.000  
-10.000  
-10.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.

YMRP .0000 IN.

ZMRP 375.0000 IN.

SCALE .0150

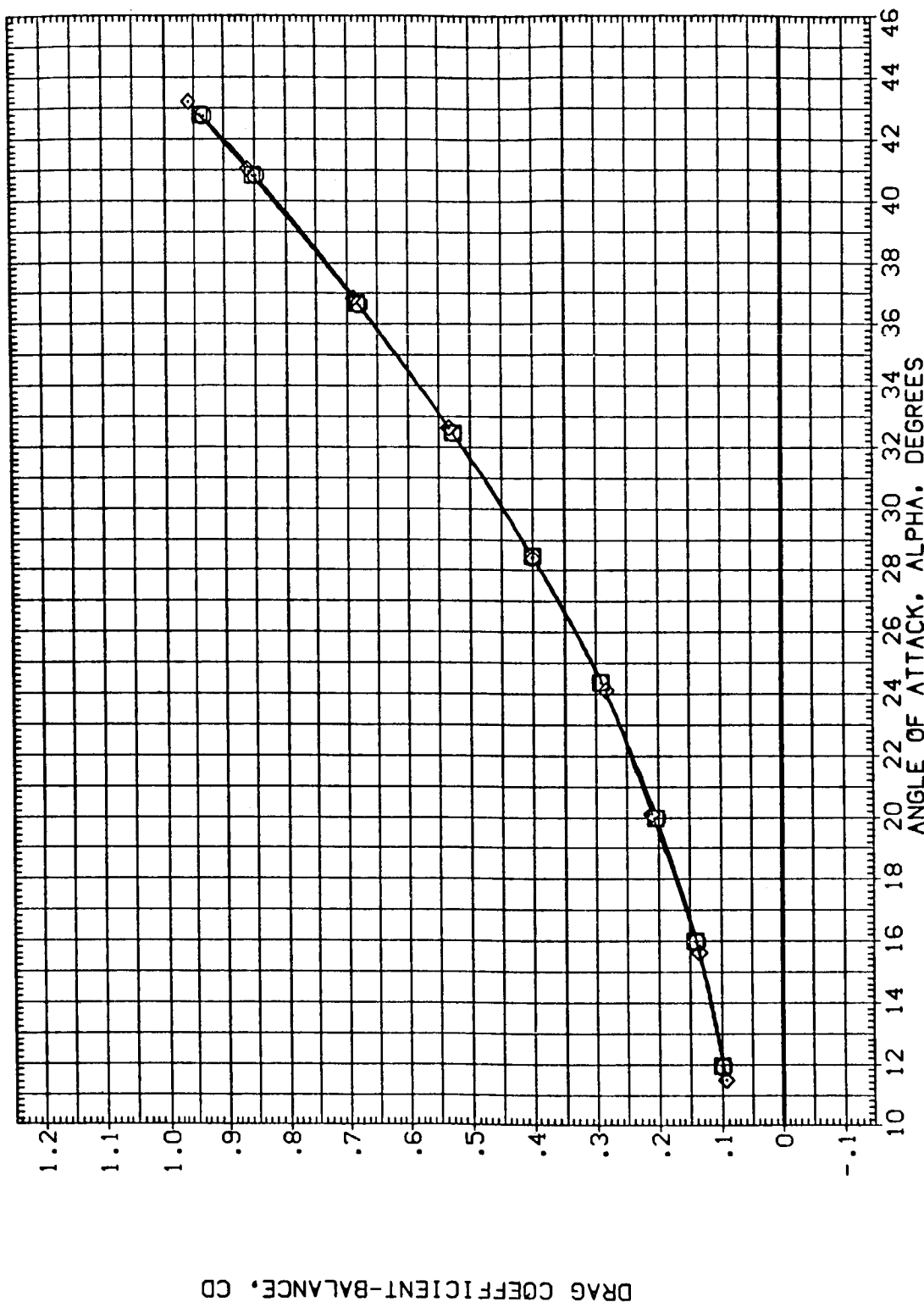


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CEQ002)	AMES 3.5-190 DA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEQ010)	AMES 3.5-190 DA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CEQ018)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

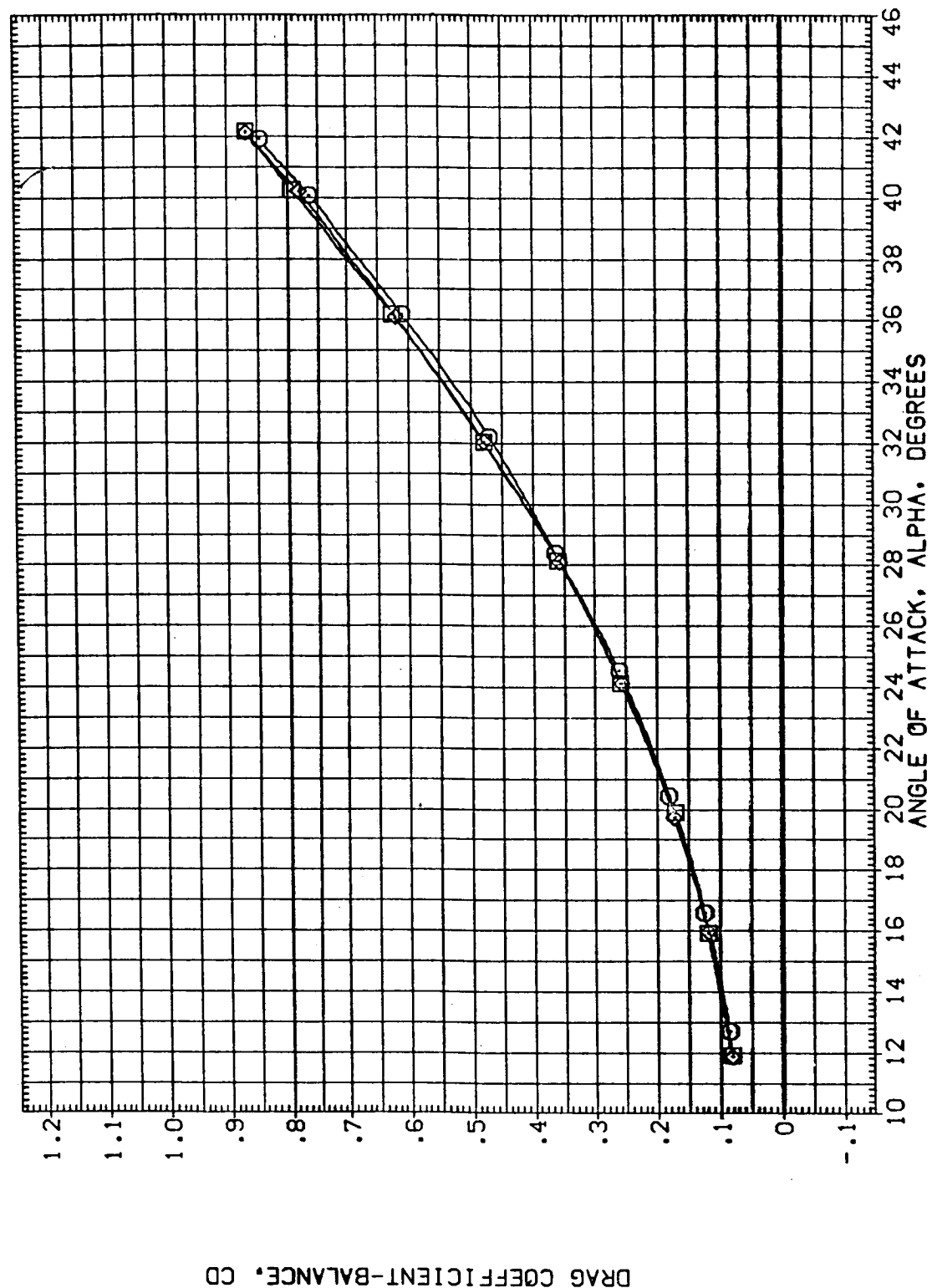


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

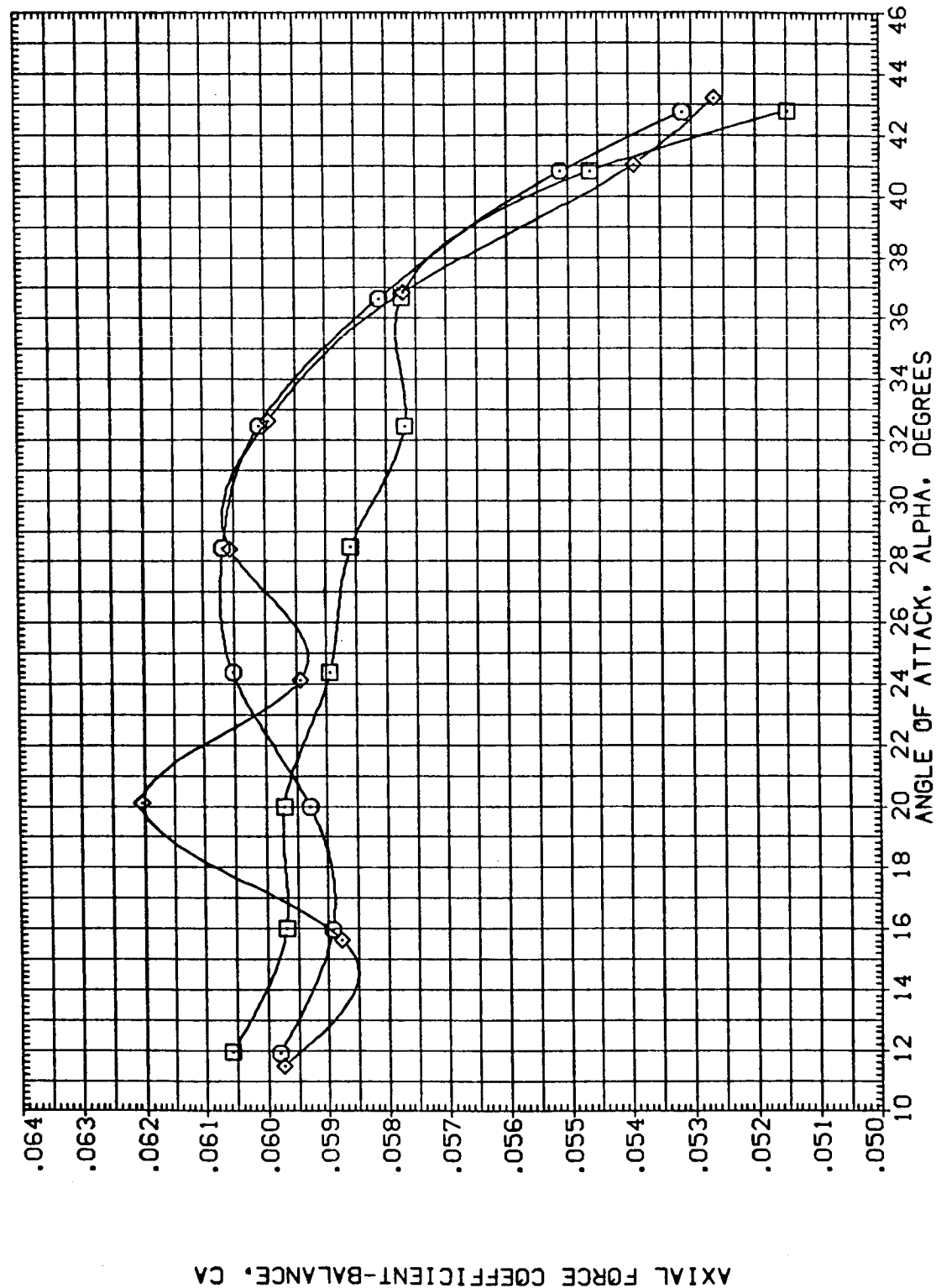


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(CE0002)	AMES 3.5-190 GA98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

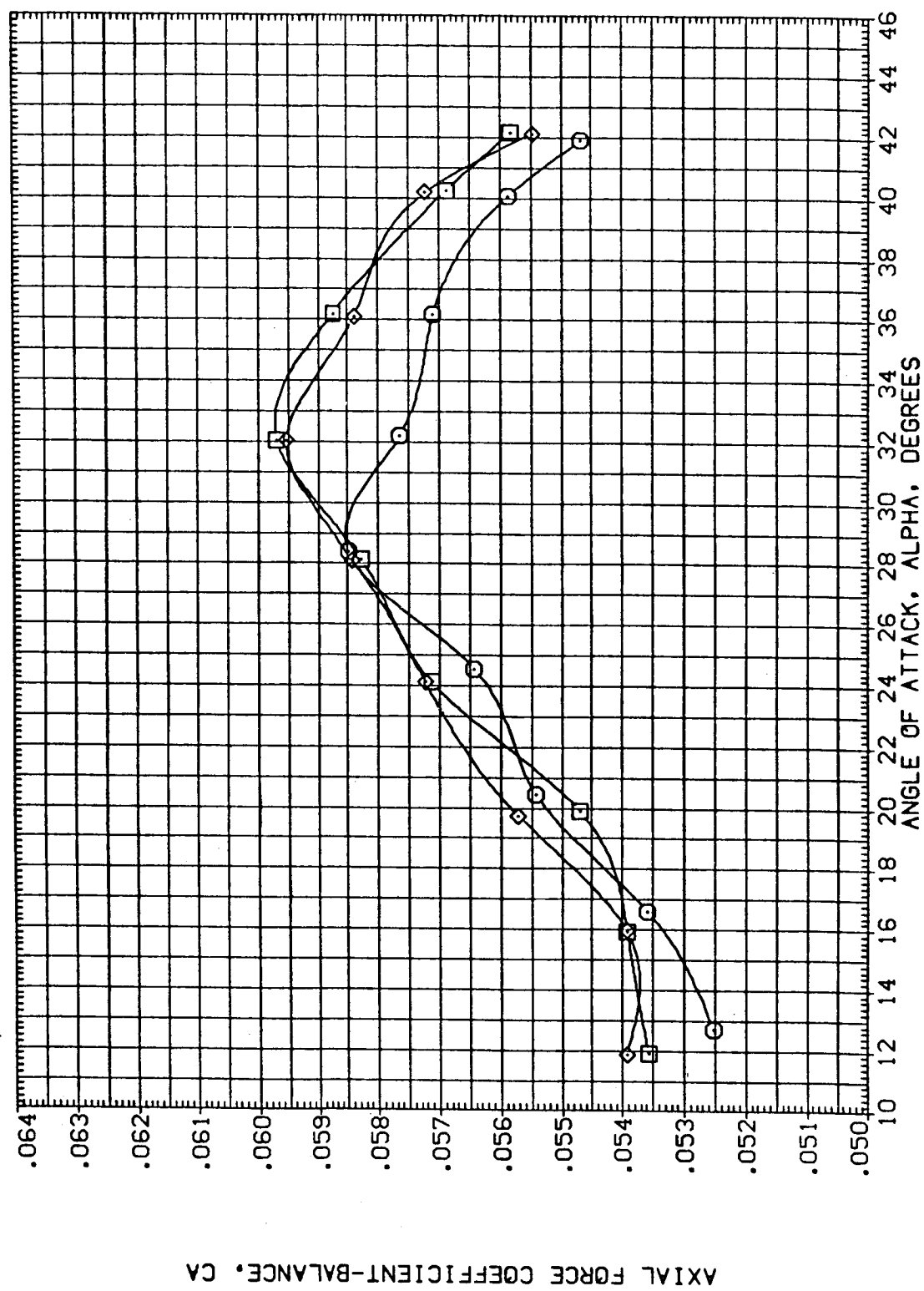


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CE0002) AMES 3.5-190 0A98 (011-474M14)

(CE0010) AMES 3.5-190 0A98 (011-474M14-N24)

(CE0018) AMES 3.5-190 0A98 (011-474M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

.000 -10.000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 50.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN. X0

YMRP .0000 IN. Y0

ZMRP 375.0000 IN. Z0

SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

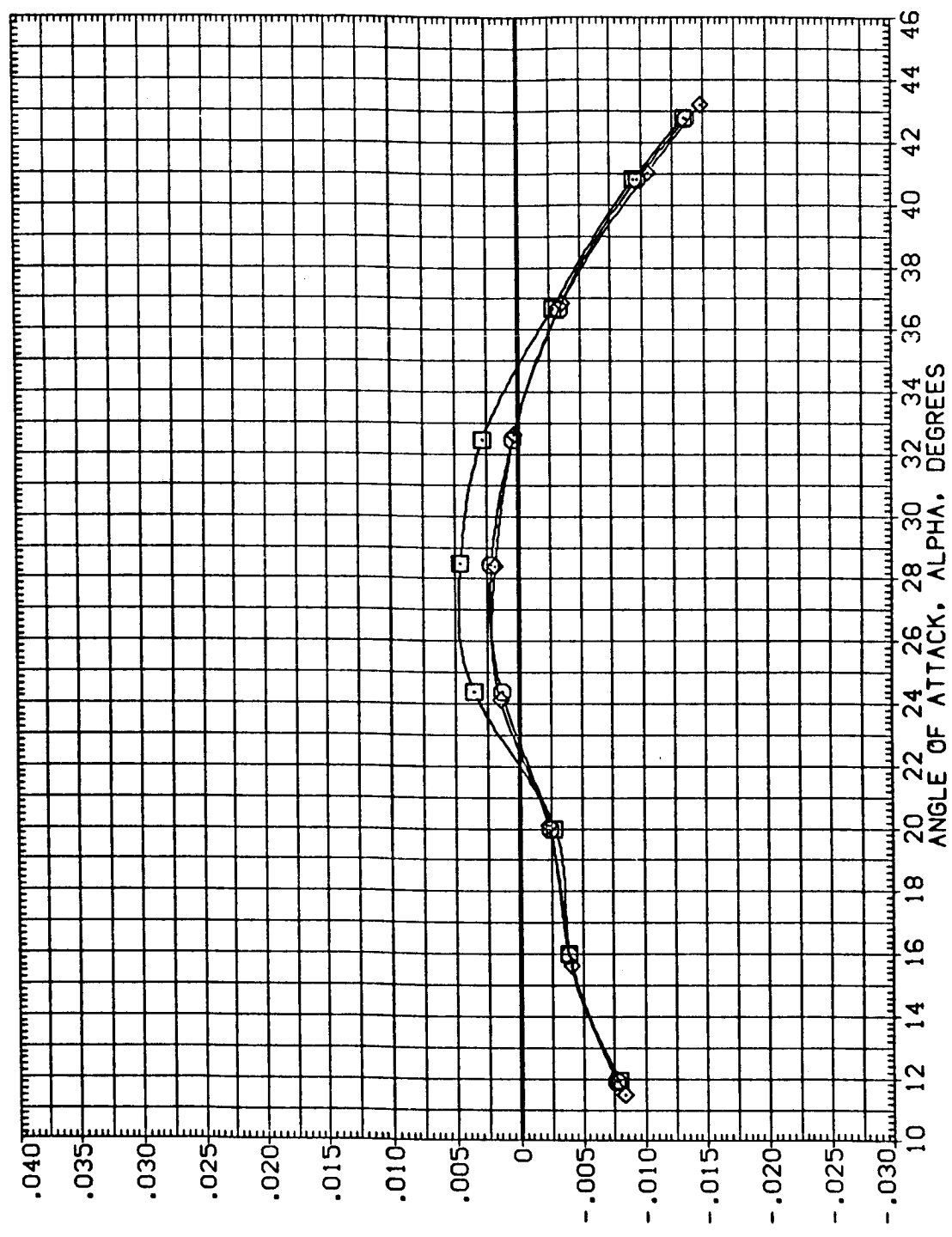


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0002)	AMES 3.5-150 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AMES 3.5-150 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AMES 3.5-150 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XPRP 1076.7000 IN.XB
						YPRP .0000 IN.YB
						ZPRP .0000 IN.ZB
						SCALE .0150

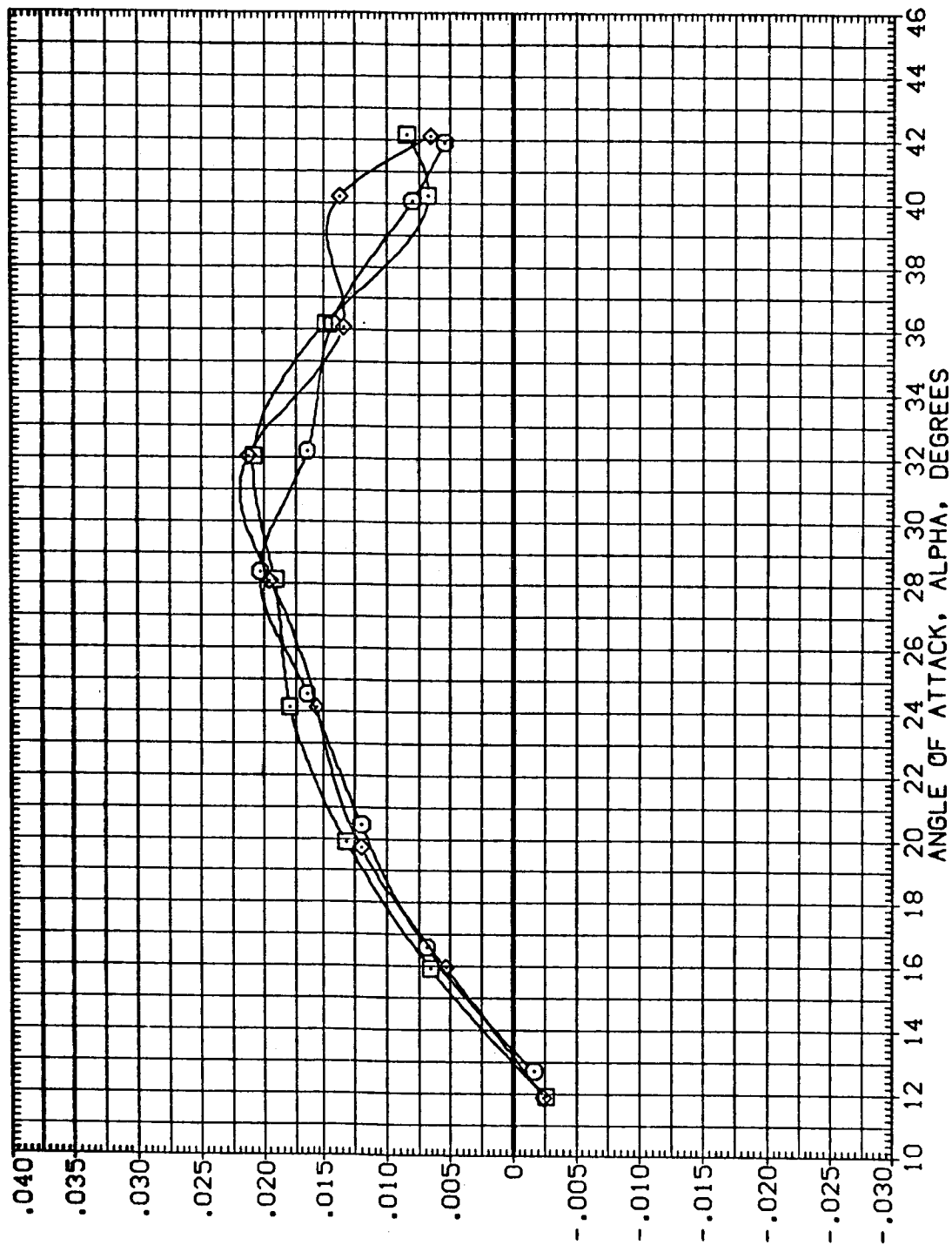


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

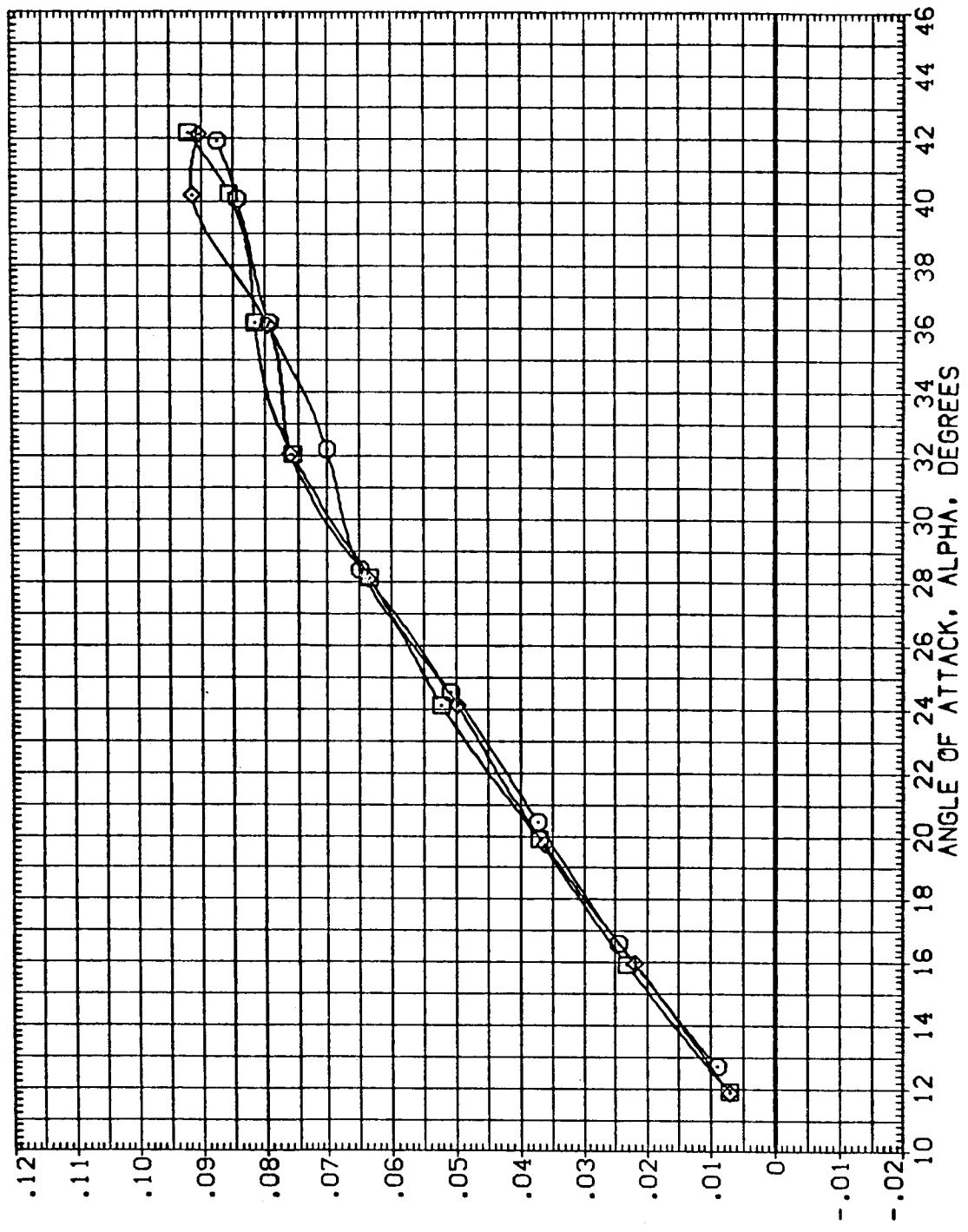


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0002)	AVES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AVES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

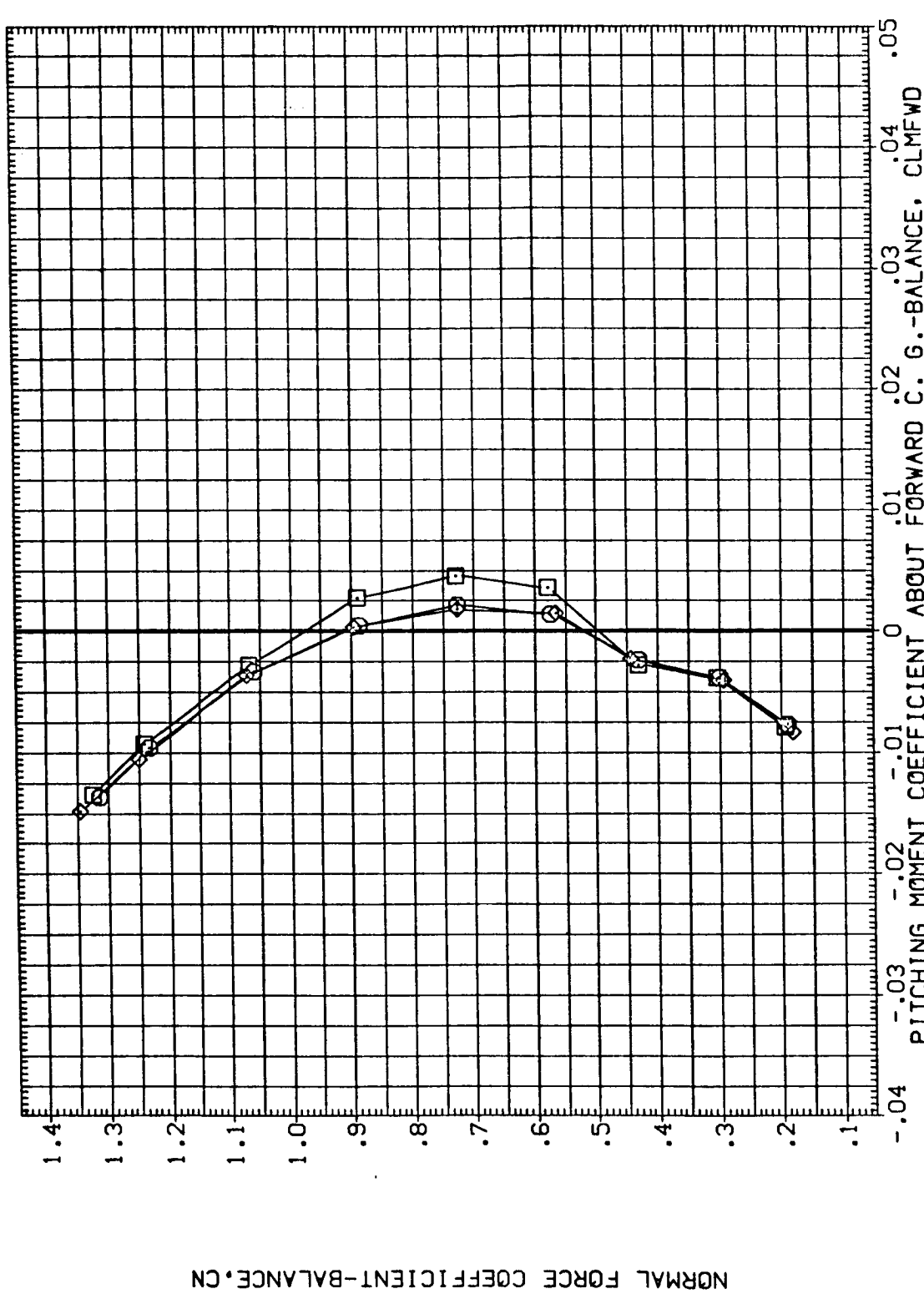


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(CE0002)	AMES 3.5-190 D498 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AMES 3.5-190 D498 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AMES 3.5-190 D498 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

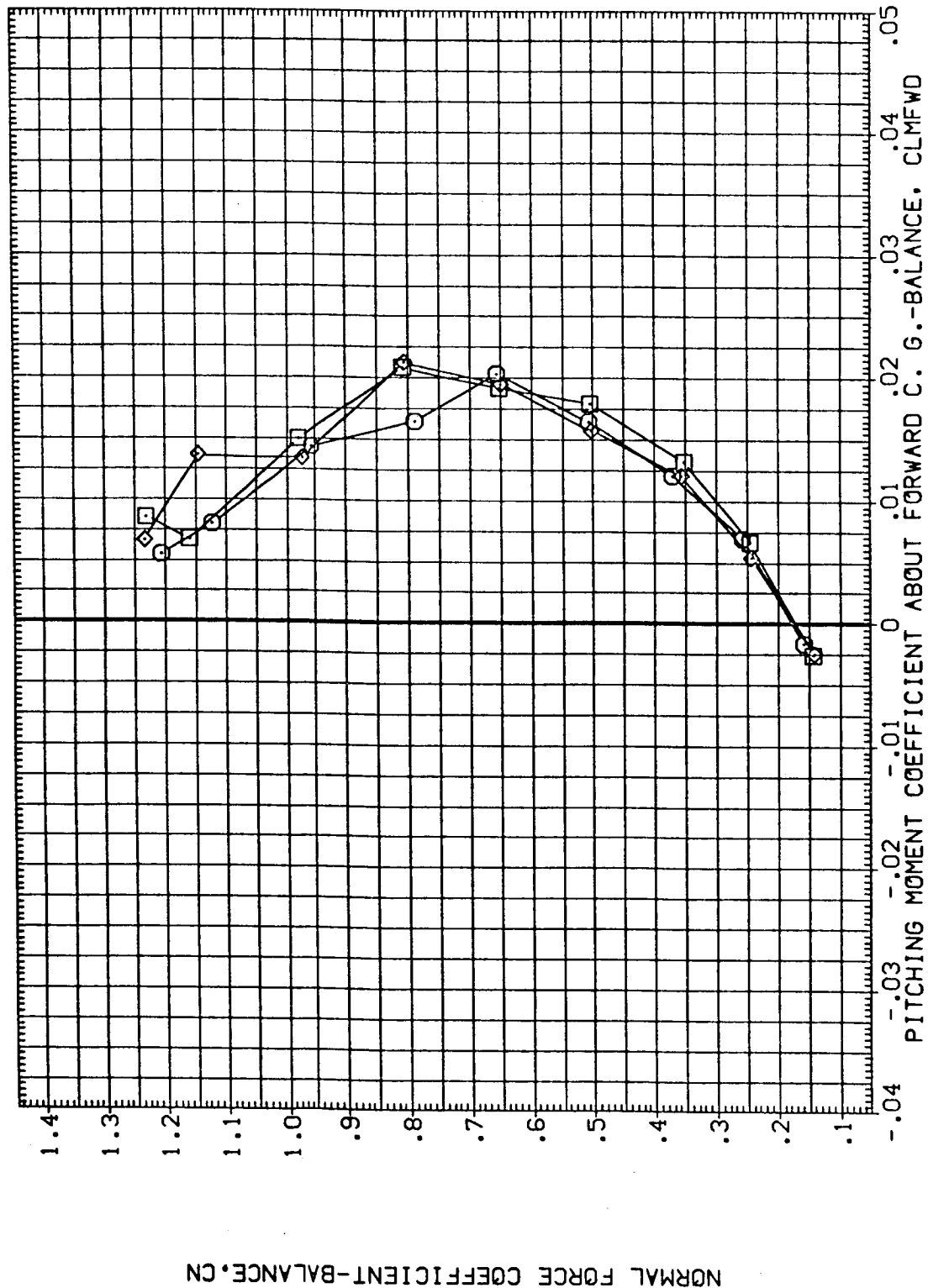


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B) MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0002)	AMES 3.5-190 OA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN. X0
						XMRP 1076.7000 IN. Y0
						YMRP 375.0000 IN. Z0
						SCALE .0150

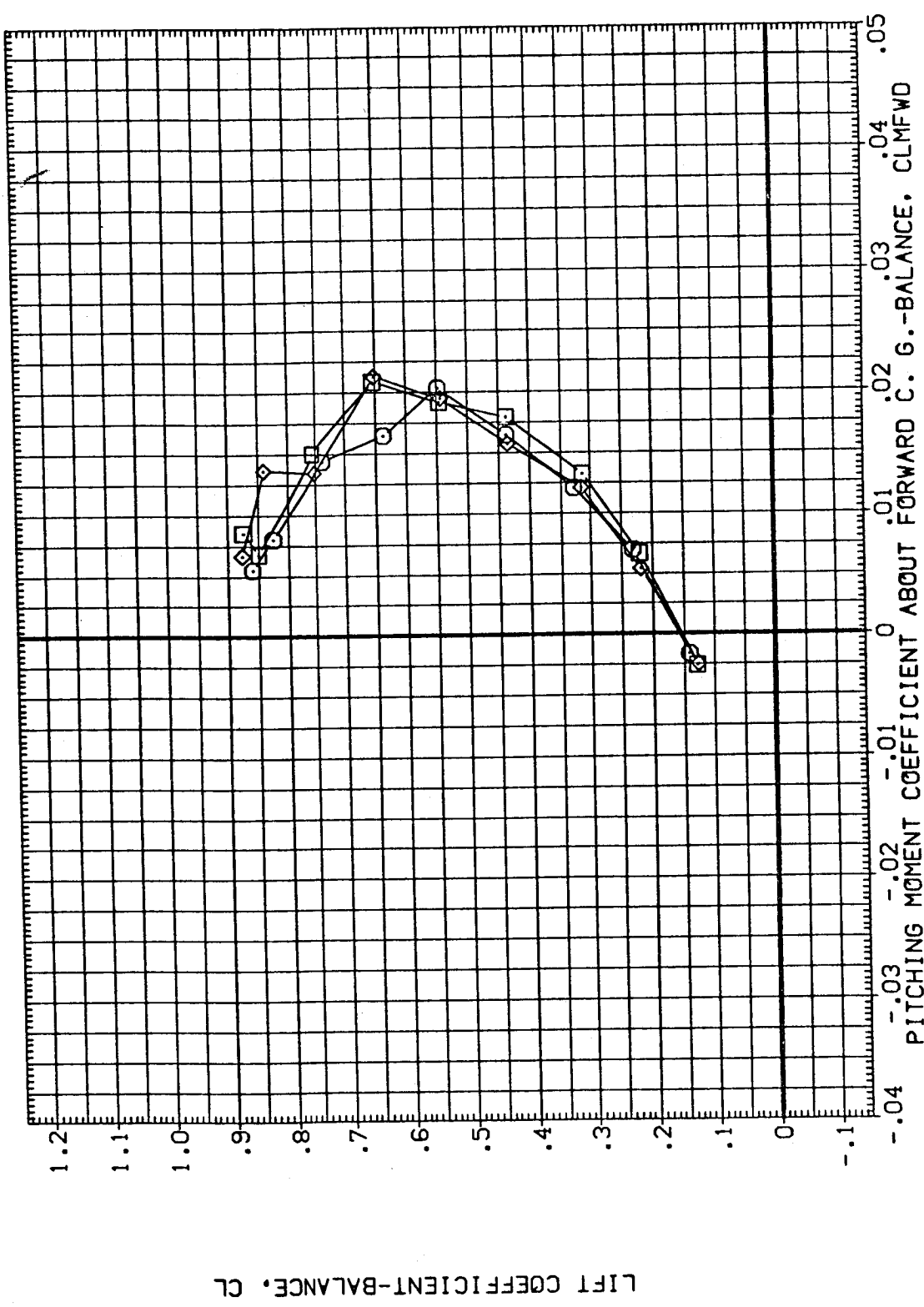


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(CE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

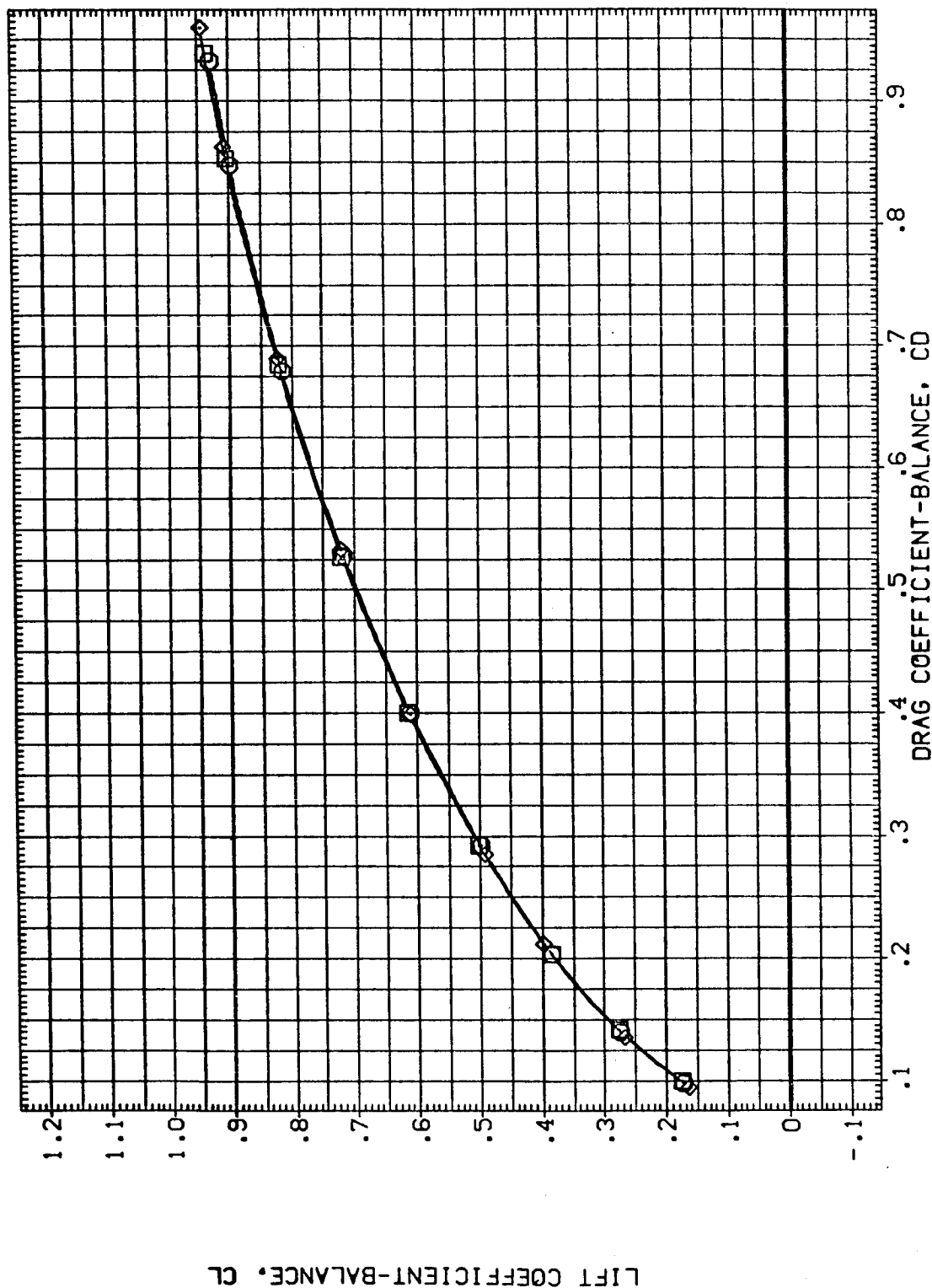


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(CE0002)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(CE0010)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF	474.8000 IN.
(CE0018)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	-10.000	-11.700	55.000	BREF	936.6800 IN.
						XMRP	1076.7000 IN.X0
						YMRP	.0000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

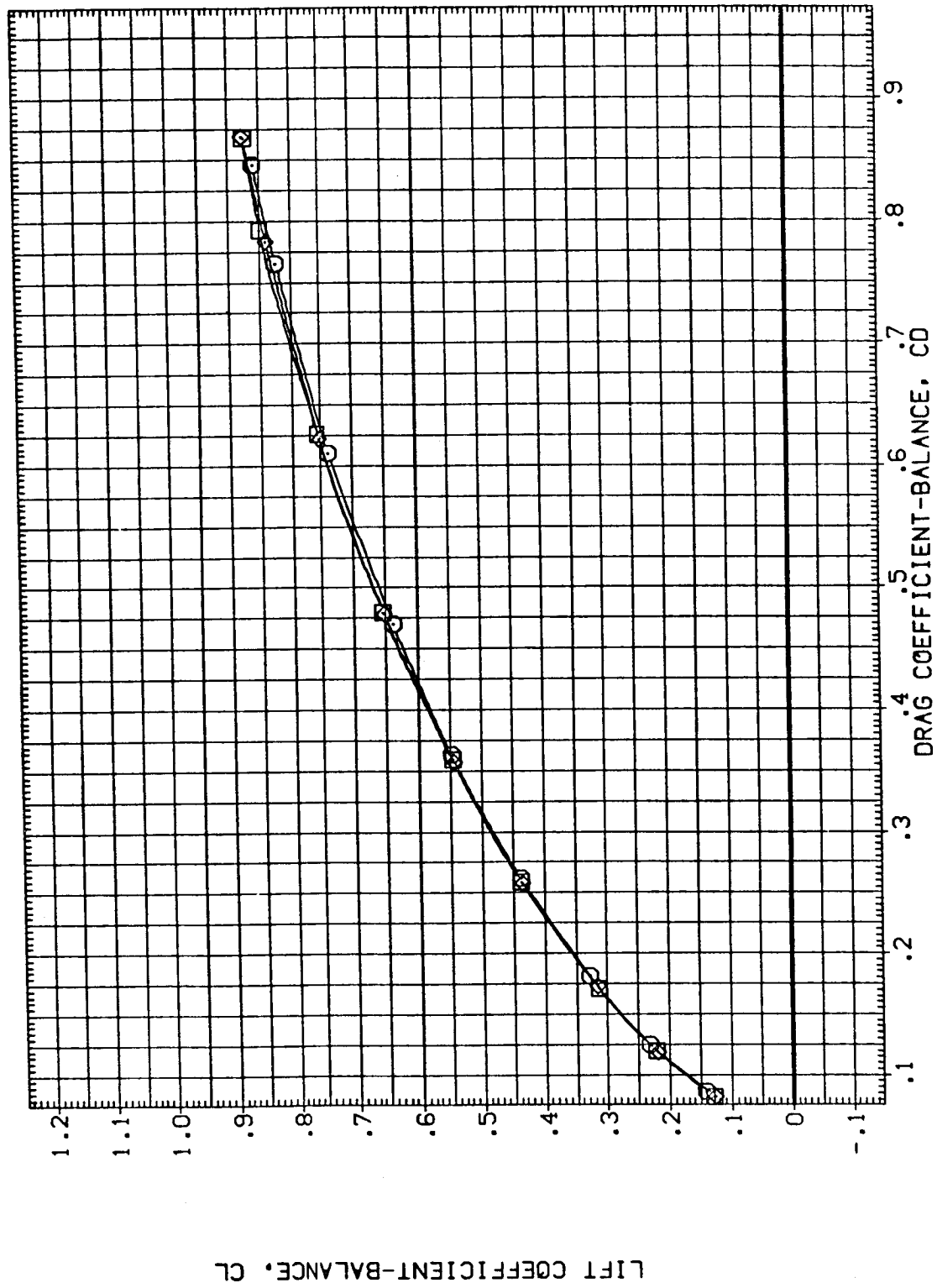


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 0A98 (011-47+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0010)	AMES 3.5-190 0A98 (011-47+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

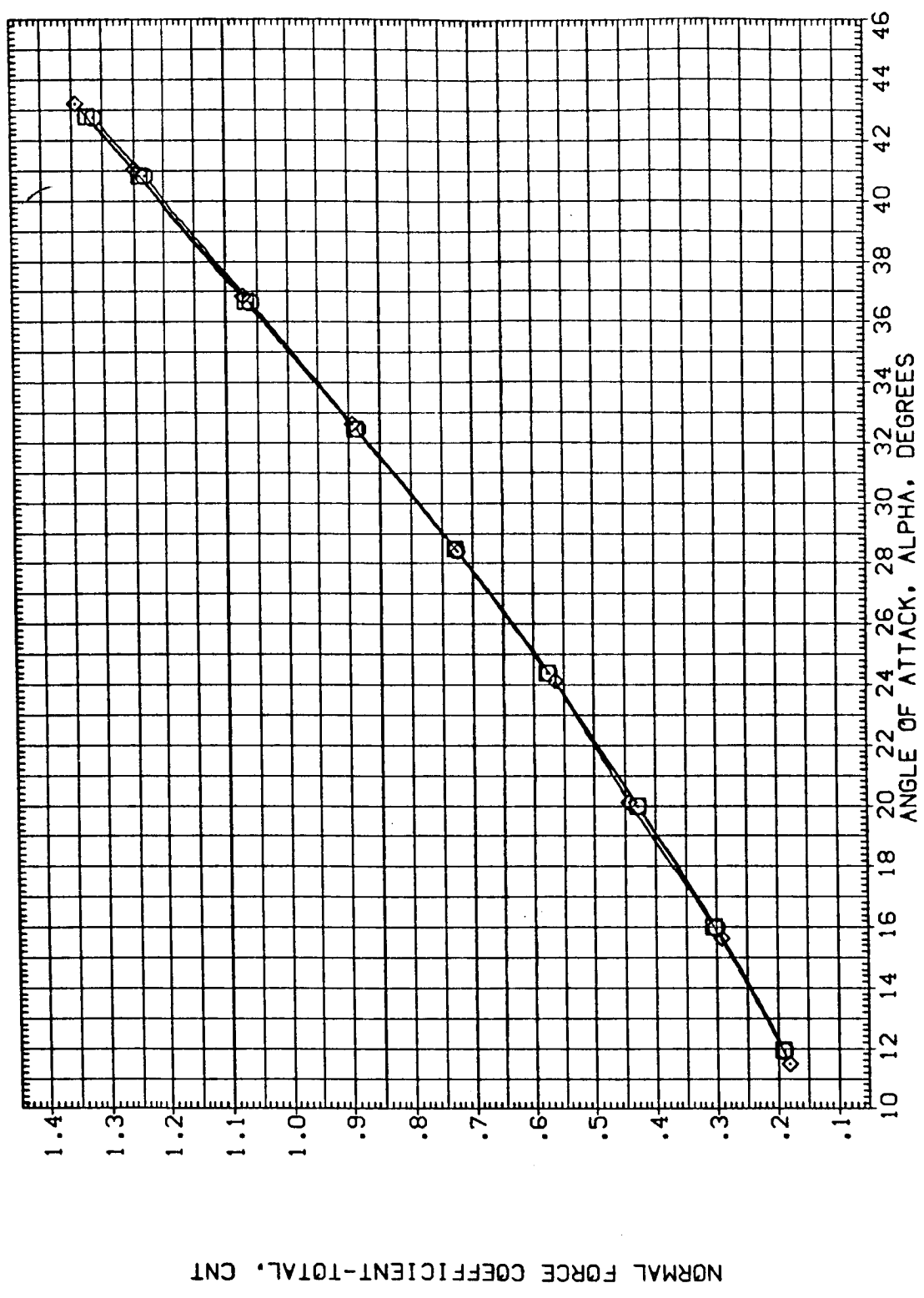


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION	
(EE0002)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF	474.8000 IN.
(EE0018)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF	936.6800 IN.
						XMRP	1076.7000 IN.Y0
						YMRP	.0000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

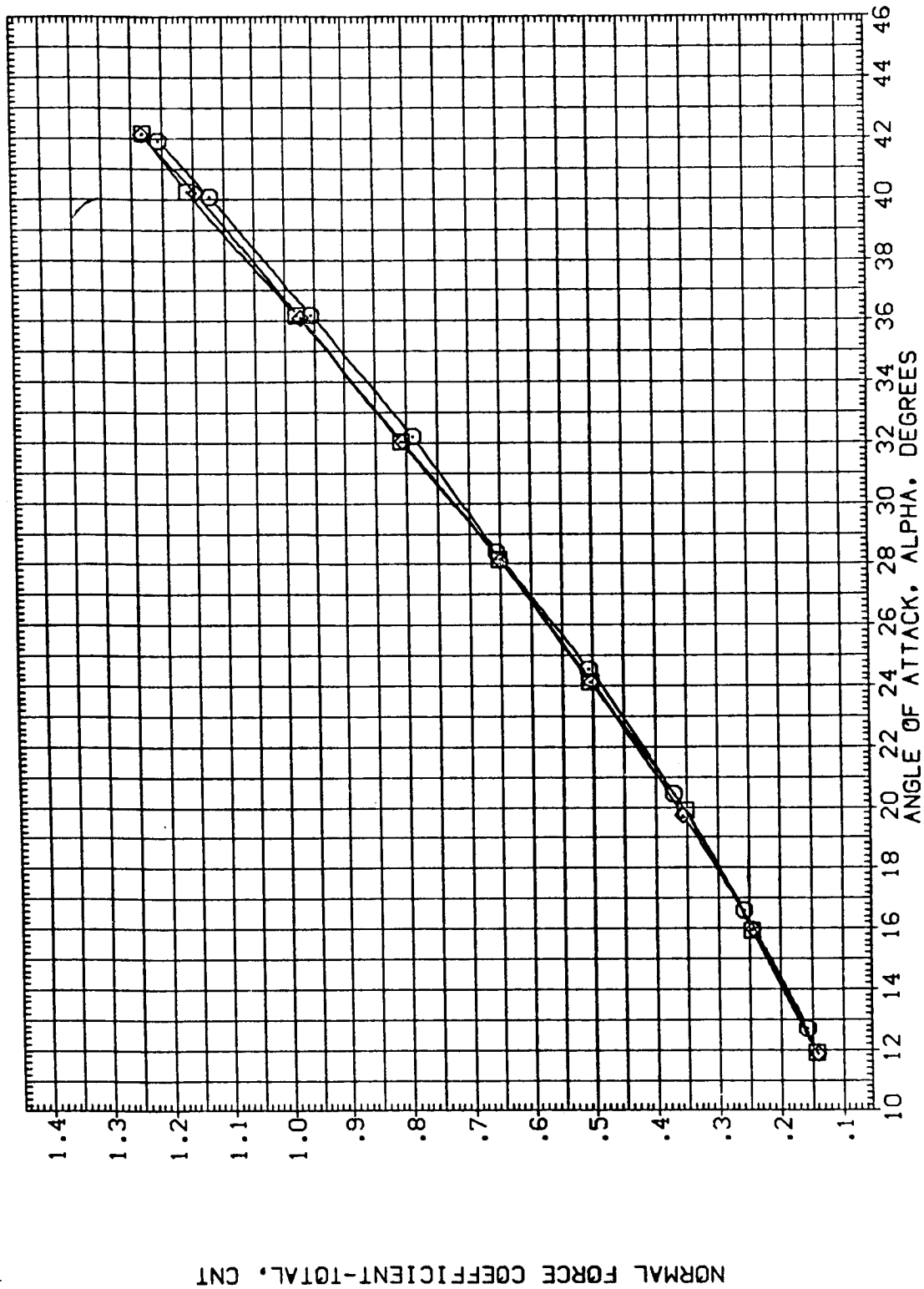


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION	DESCRIPTION
EEQ002)	AVES 3.5-190 0.98	(011-M7+M14)
EEQ010)	AVES 3.5-190 0.98	(011-M7+M14-N24)
EEQ018)	AVES 3.5-190 0.98	(011-M7+M14-N2+DUPPLY STING)

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTWD

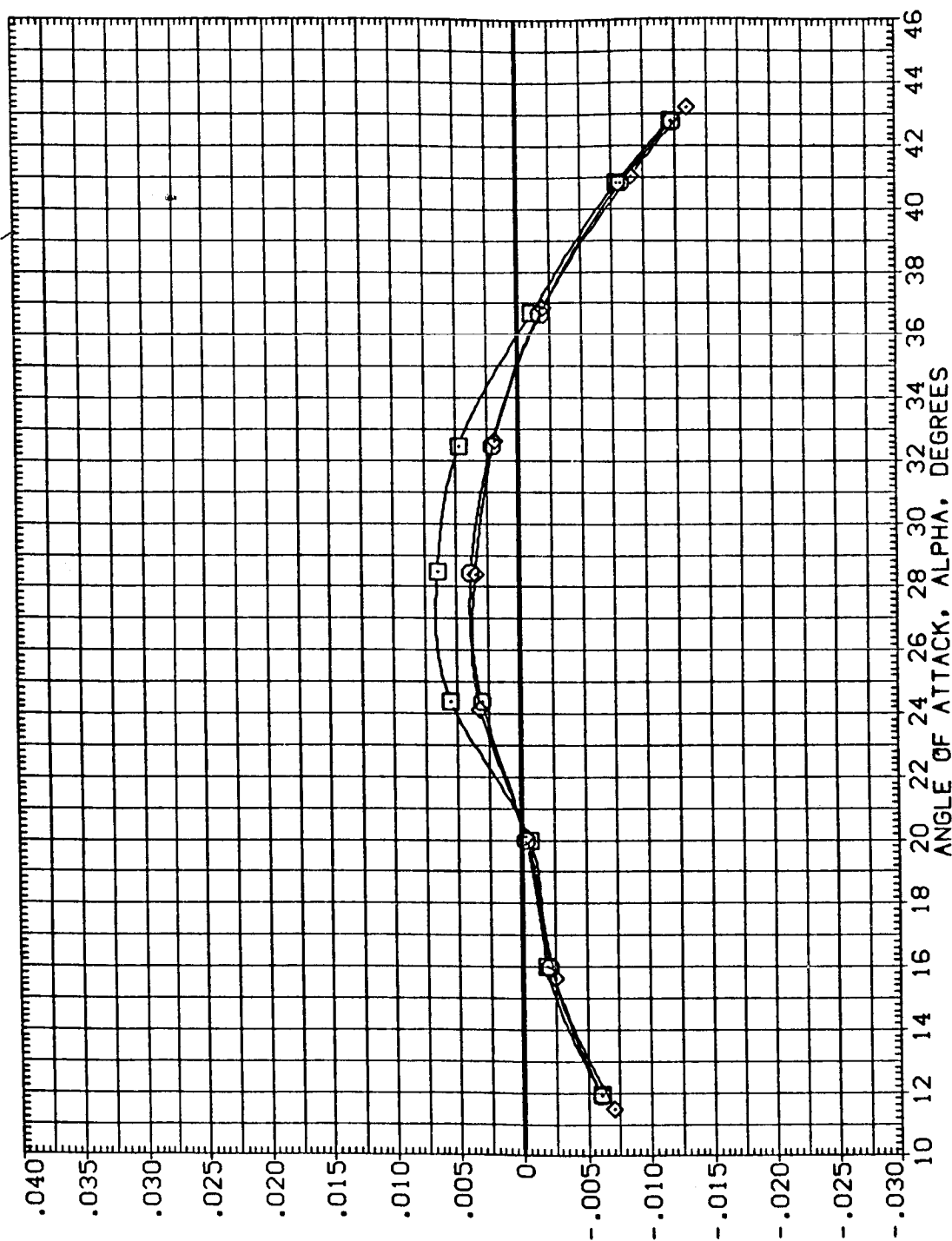


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPOBRK REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 OA98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMFW

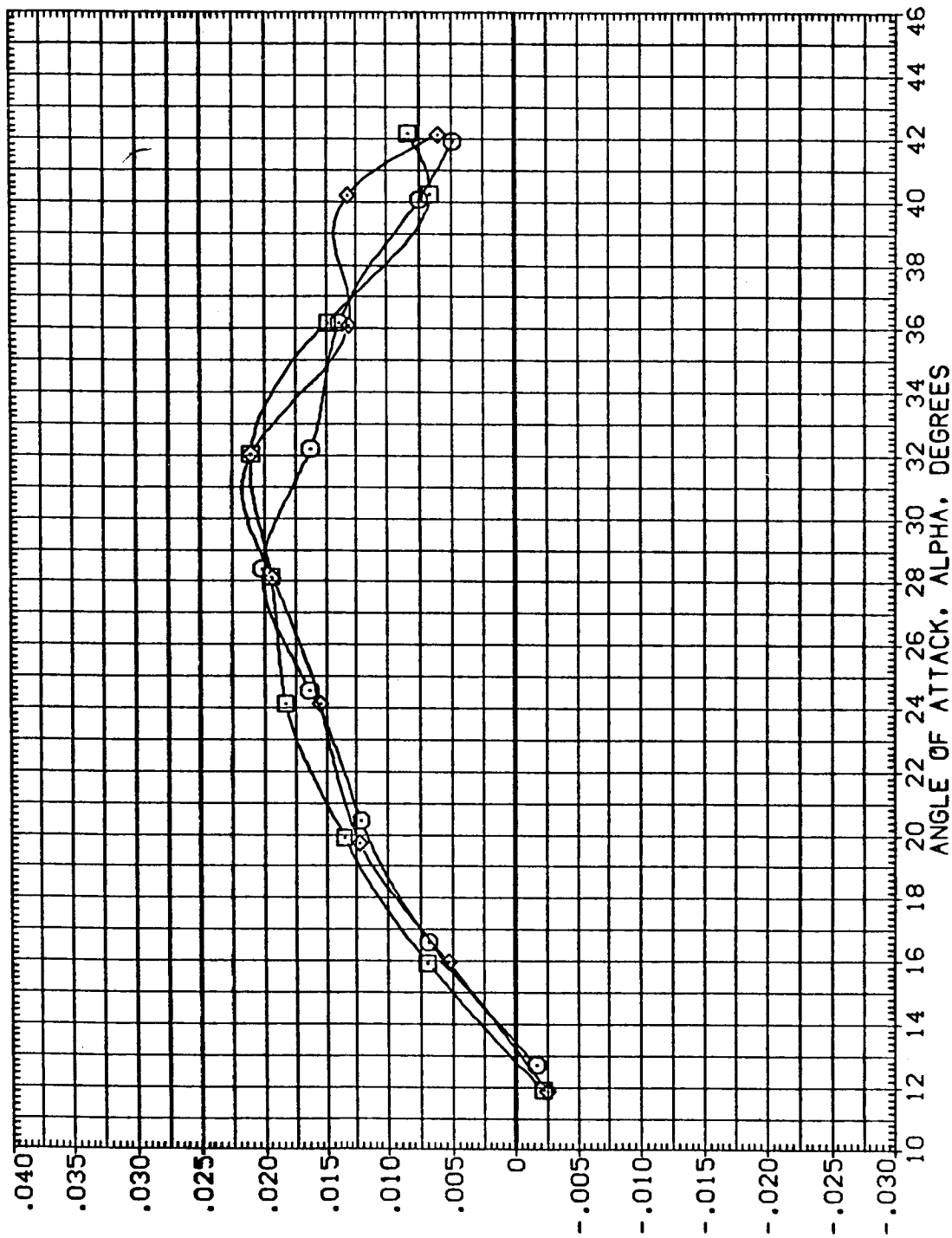


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AVES 3.5-190 OASB (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AVES 3.5-190 OASB (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AVES 3.5-190 OASB (011-M7-M14-N24-DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.
						YMRP .0000 IN.
						ZMRP 375.0000 IN.
						SCALE .0150

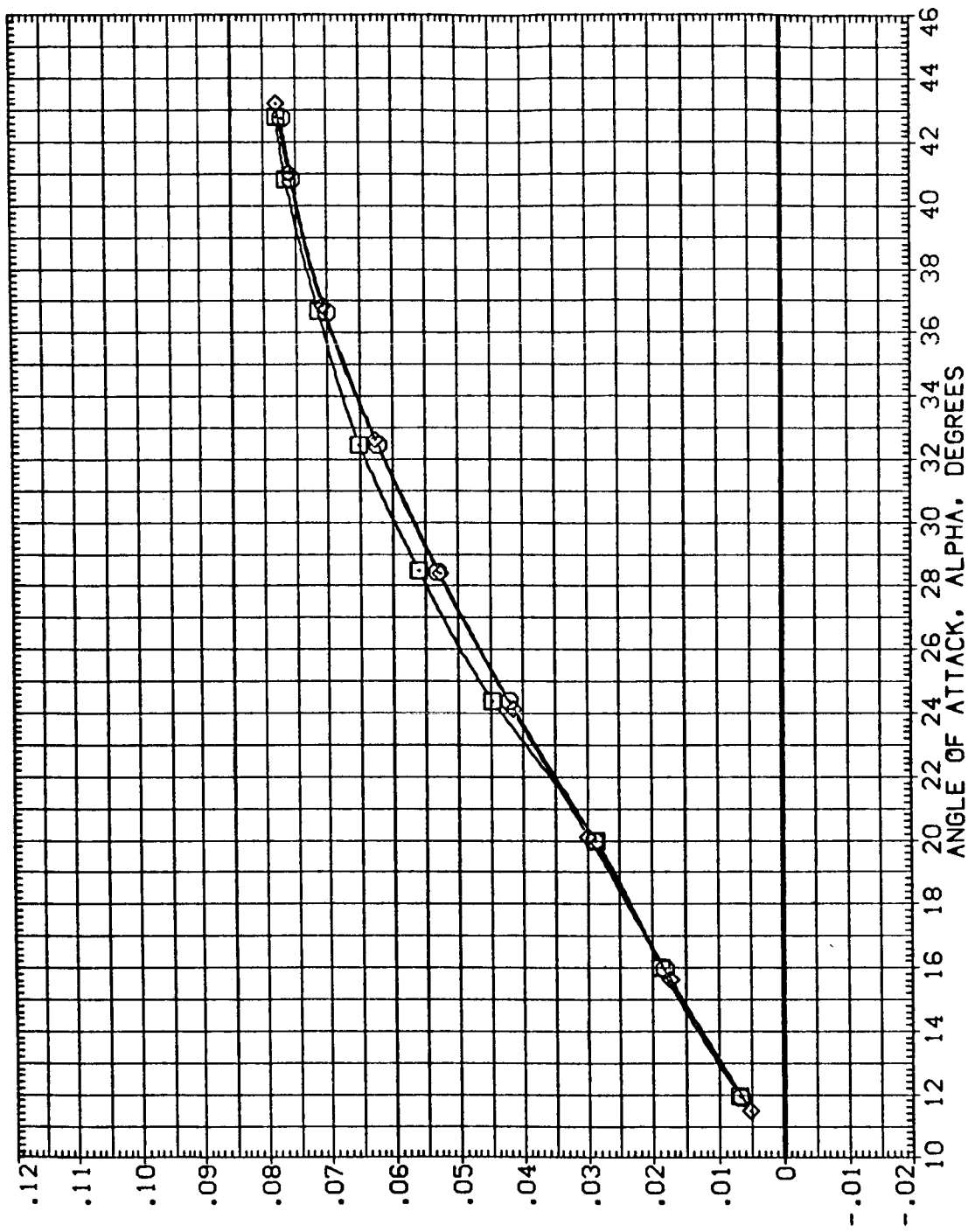


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A) MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

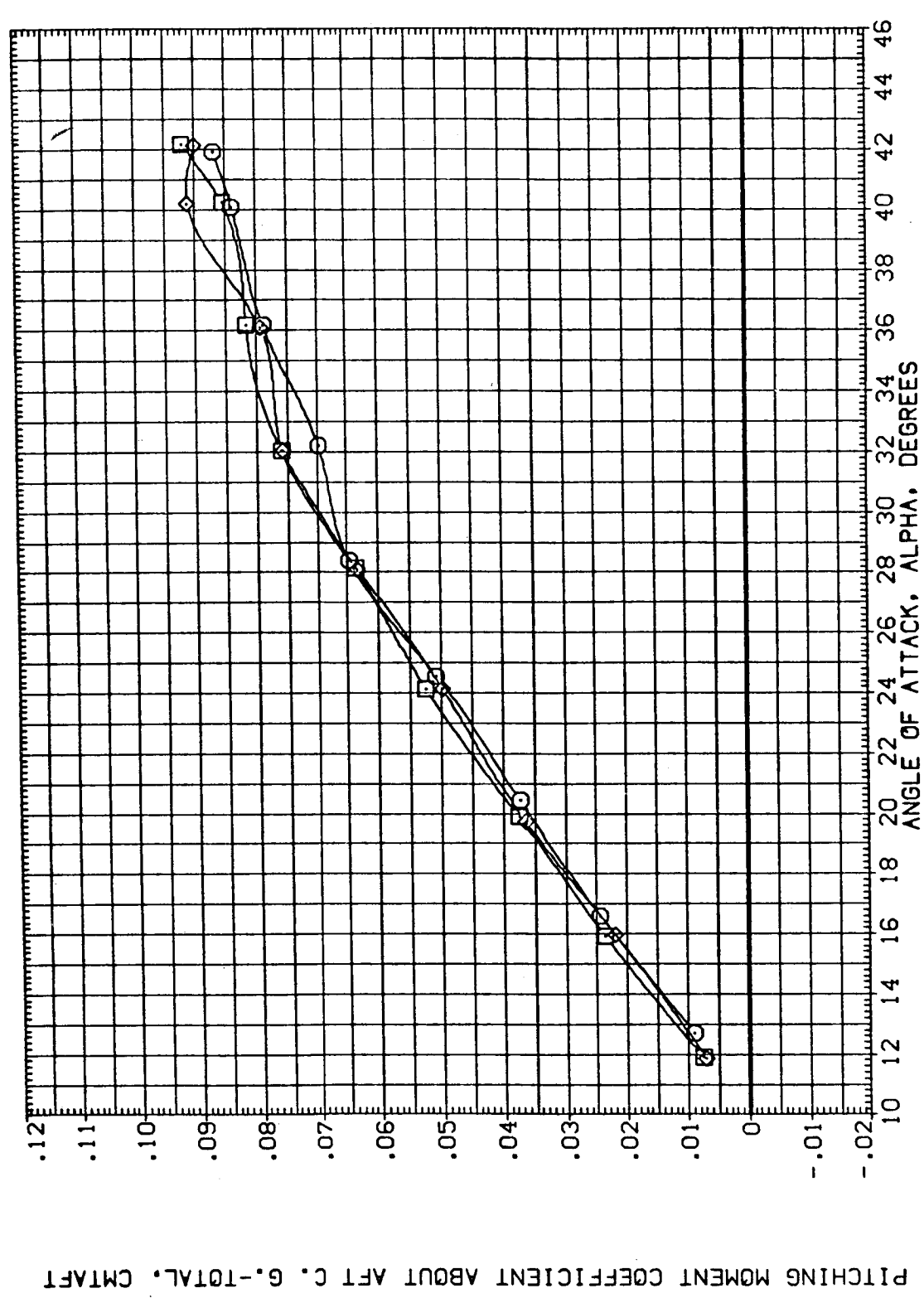


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EE0002)	AVES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AVES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

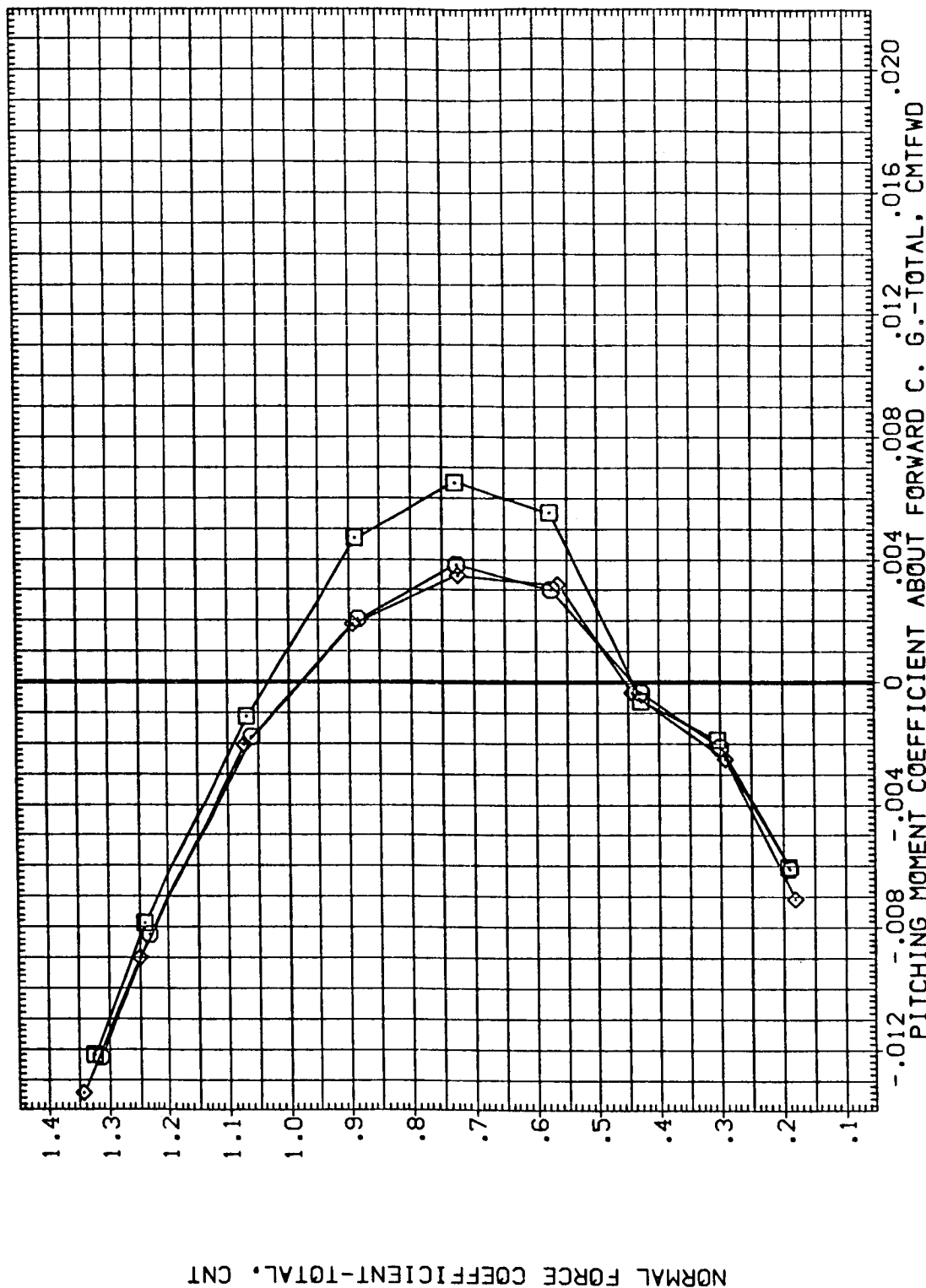


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT. IN.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

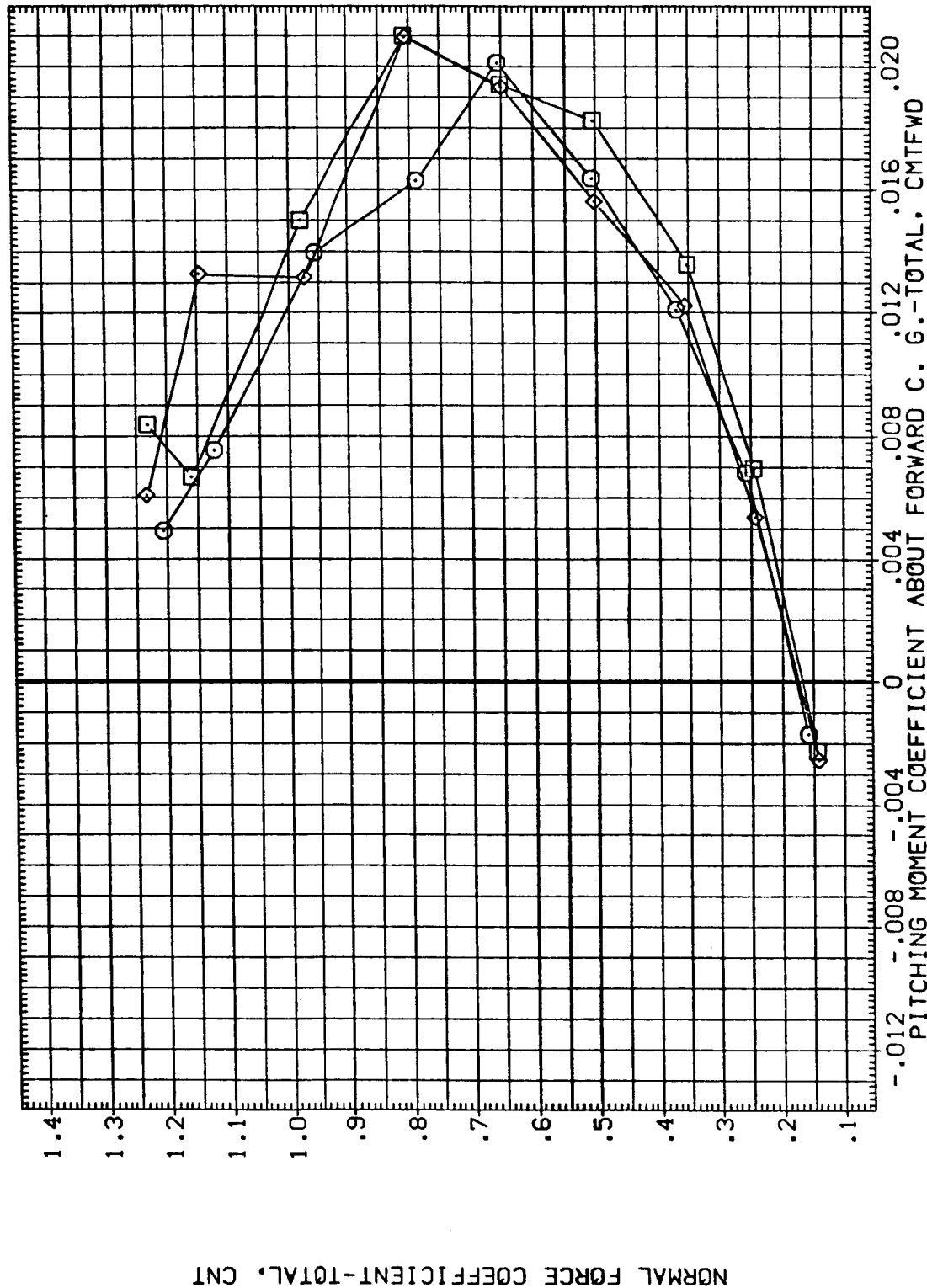


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(EE0002)  
(EE0010)  
(EE0018)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7+M14)  
AMES 3.5-190 0A98 (011-M7+M14-N24)  
AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
-10.000  
-10.000  
-10.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SQ.FT.  
SREF 2690.0000  
LREF 474.8000  
BREF 936.6800  
XMRP 1076.7000  
YMRP .0000  
ZMRP 375.0000  
SCALE .0150

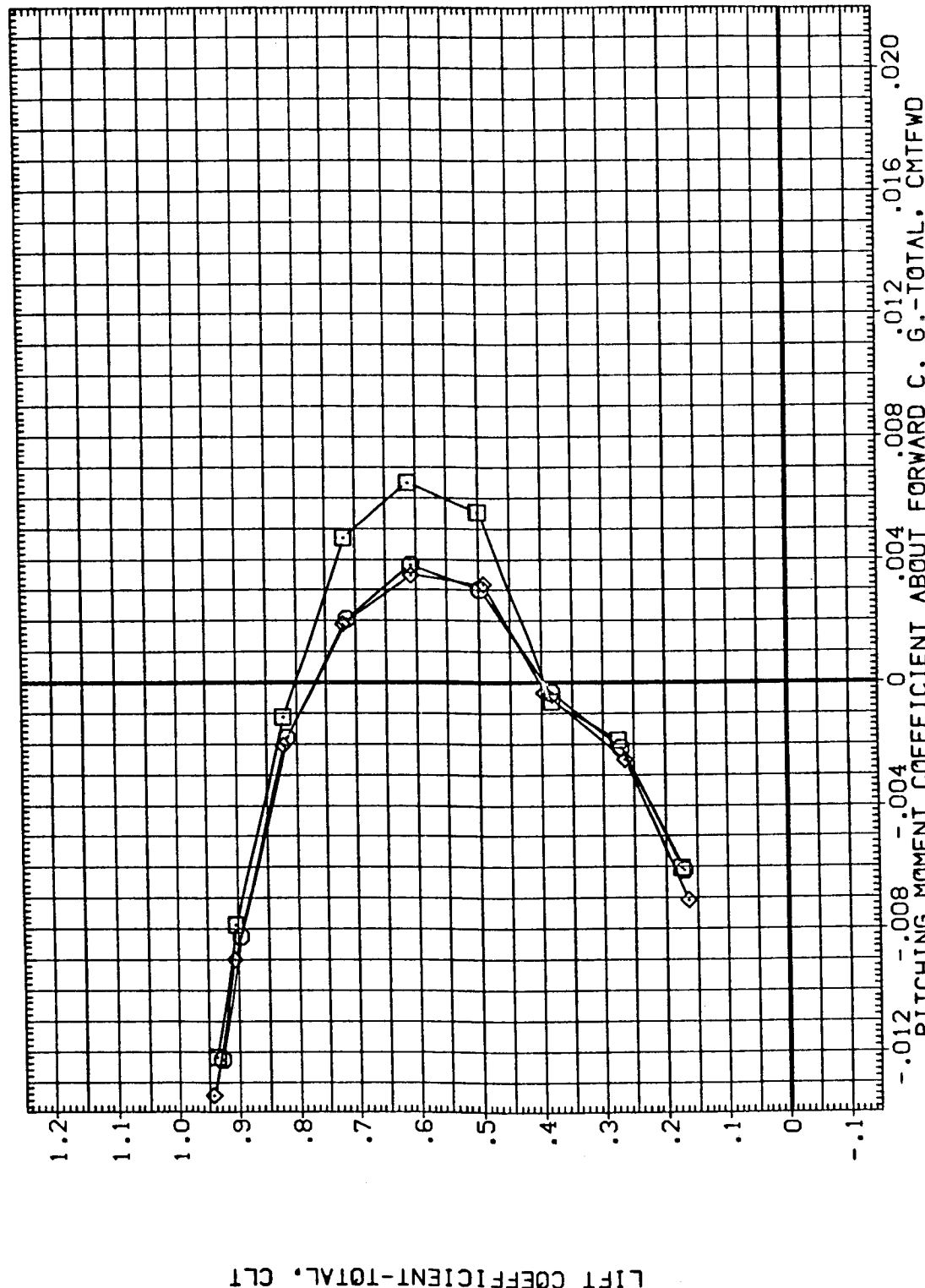


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION		
(EE0002)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF	2690.0000	SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF	474.8000	IN.
(EE0018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF	936.6800	IN.
						XMRP	1076.7000	IN. X0
						YMRP	.0000	IN. Y0
						ZMRP	375.0000	IN. Z0
						SCALE	.0150	

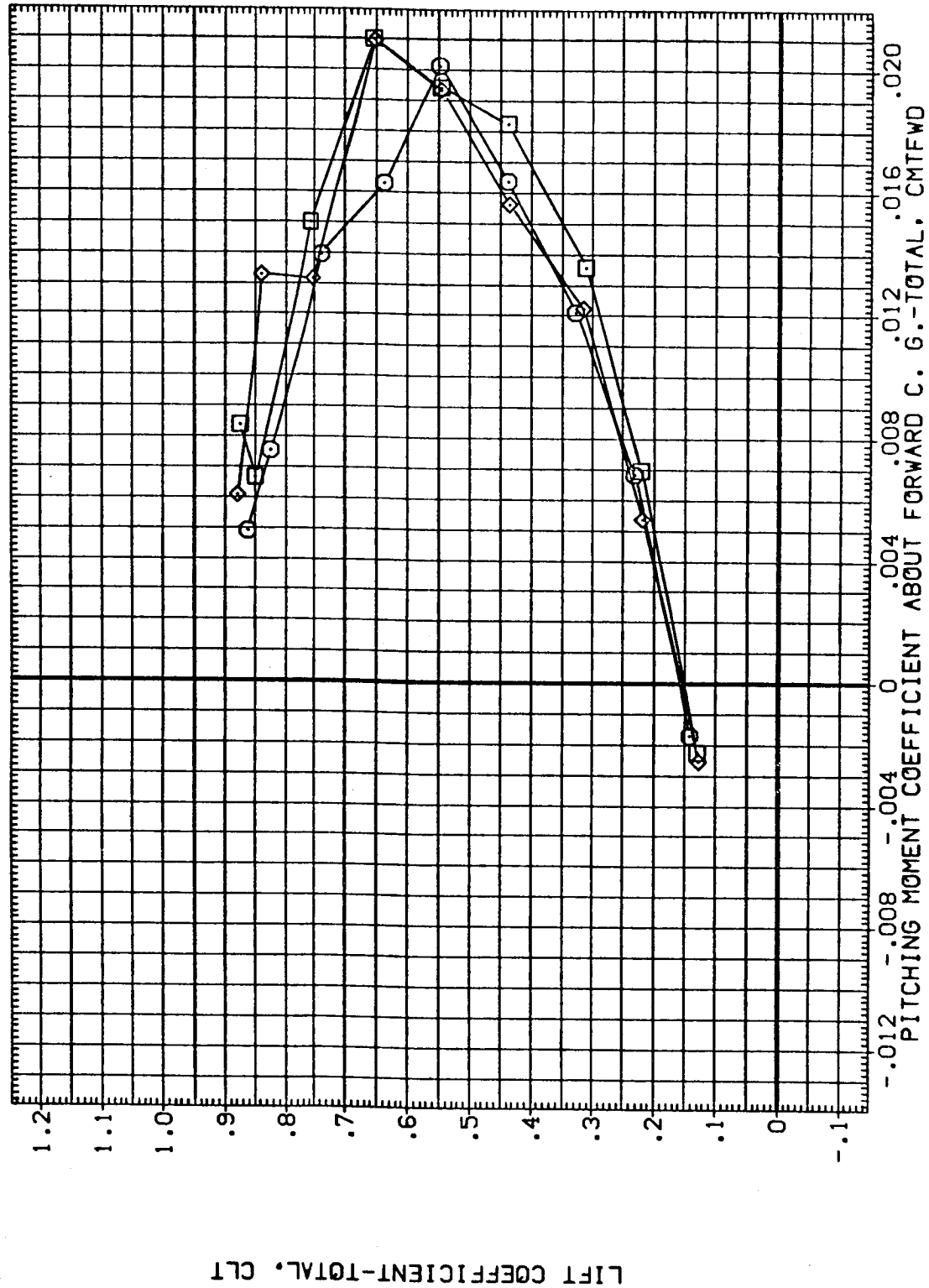


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 GA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 GA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

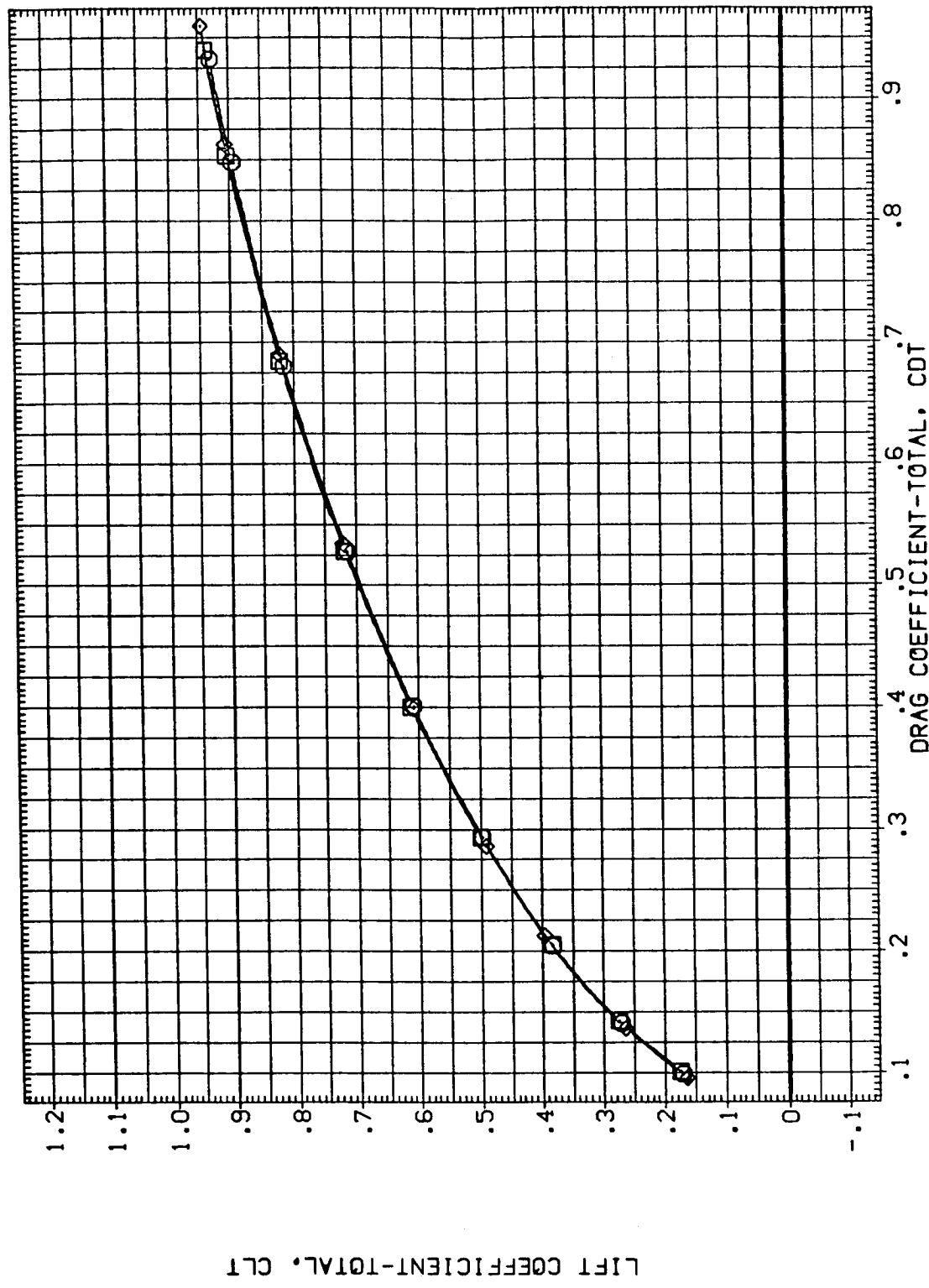


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AVES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AVES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

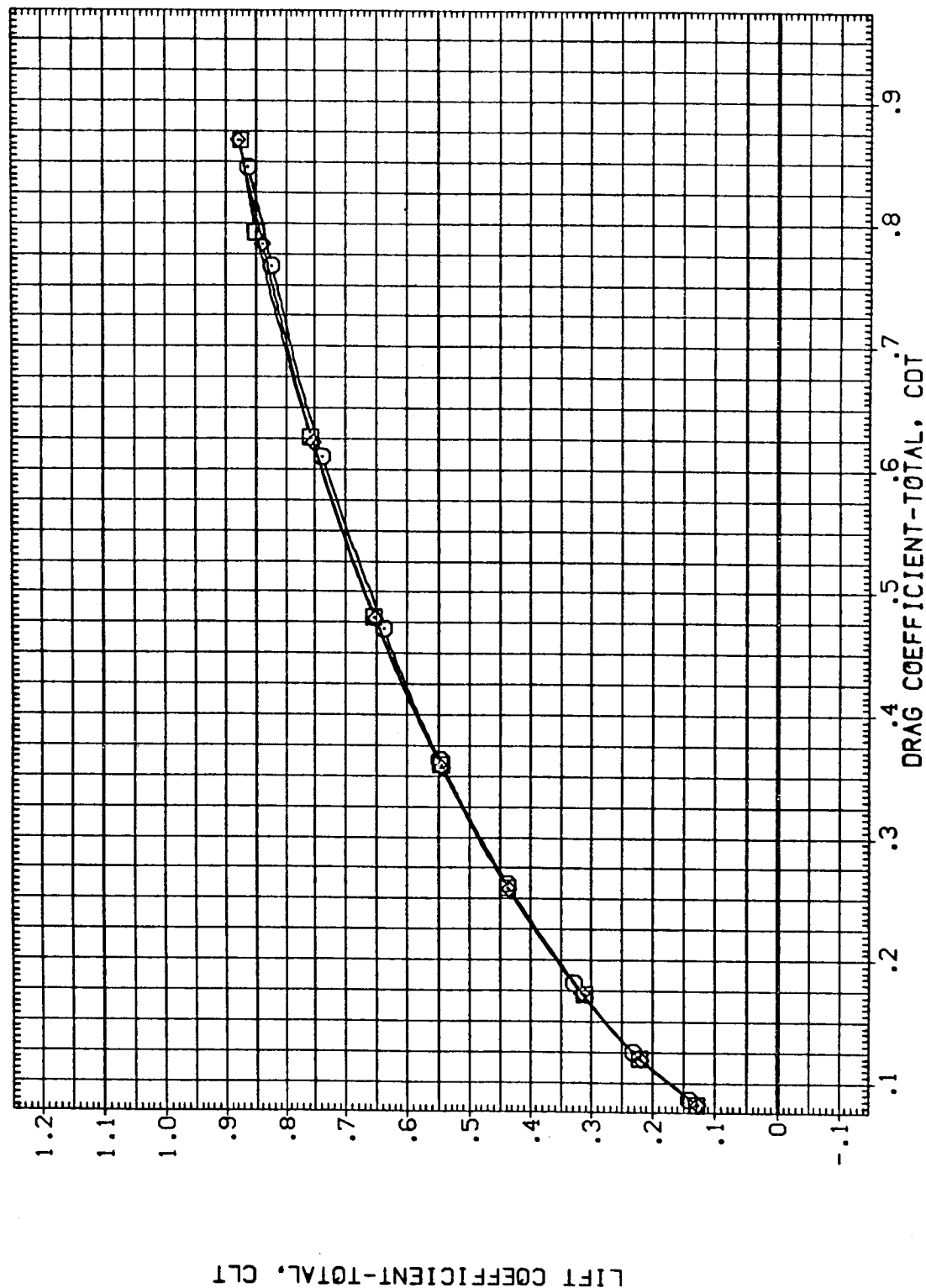


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(EE0002)  
(EE0010)  
(EE0018)

CONFIGURATION DESCRIPTION

AMES 3.5-190 0A98 (011-M7-M14)  
AMES 3.5-190 0A98 (011-M7-M14-N24)  
AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
-10.000  
-10.000  
-10.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.  
YMRP .0000 IN.  
ZMRP 375.0000 IN.  
SCALE .0150

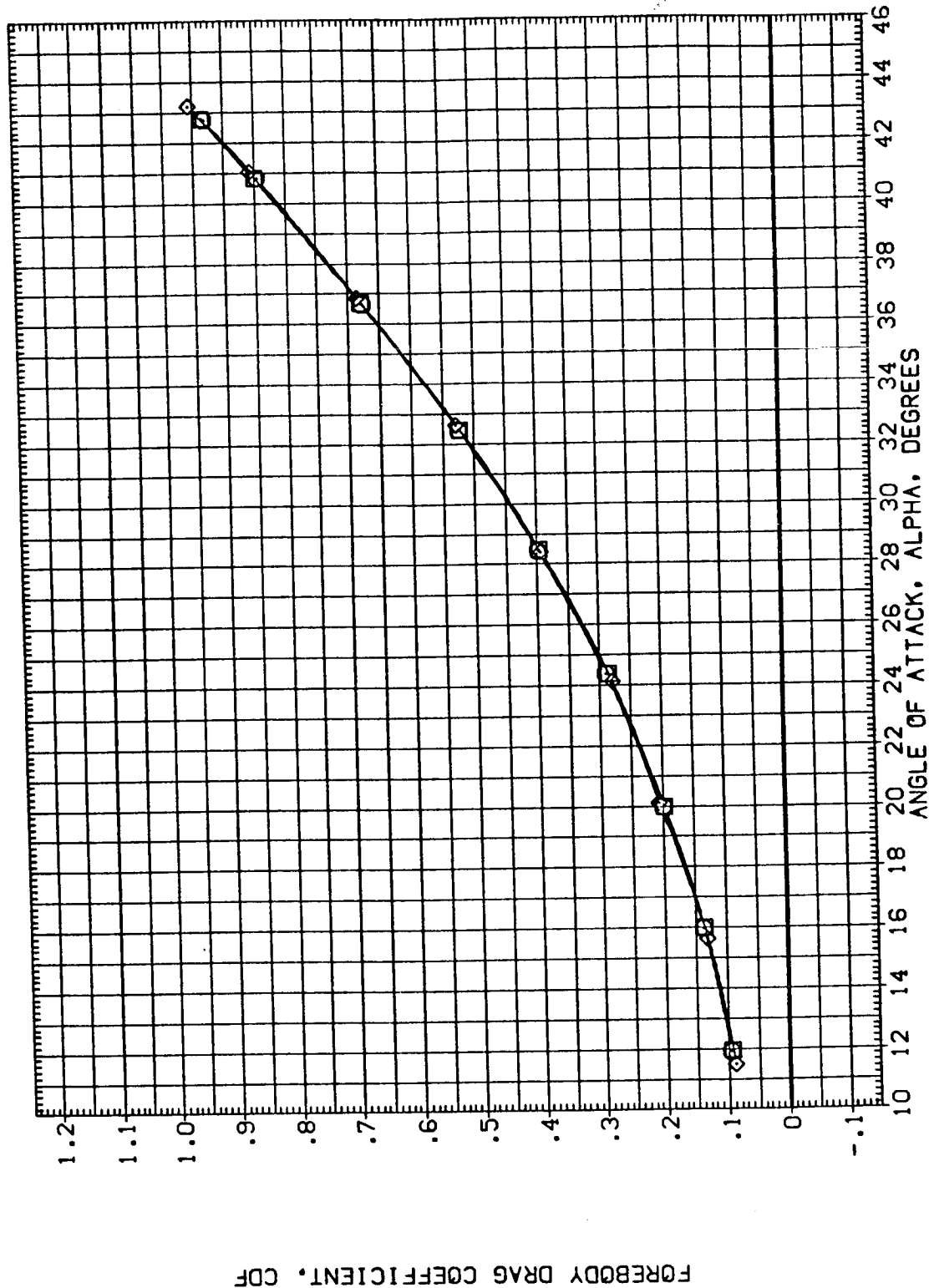


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 DAS8 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 DAS8 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 DAS8 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

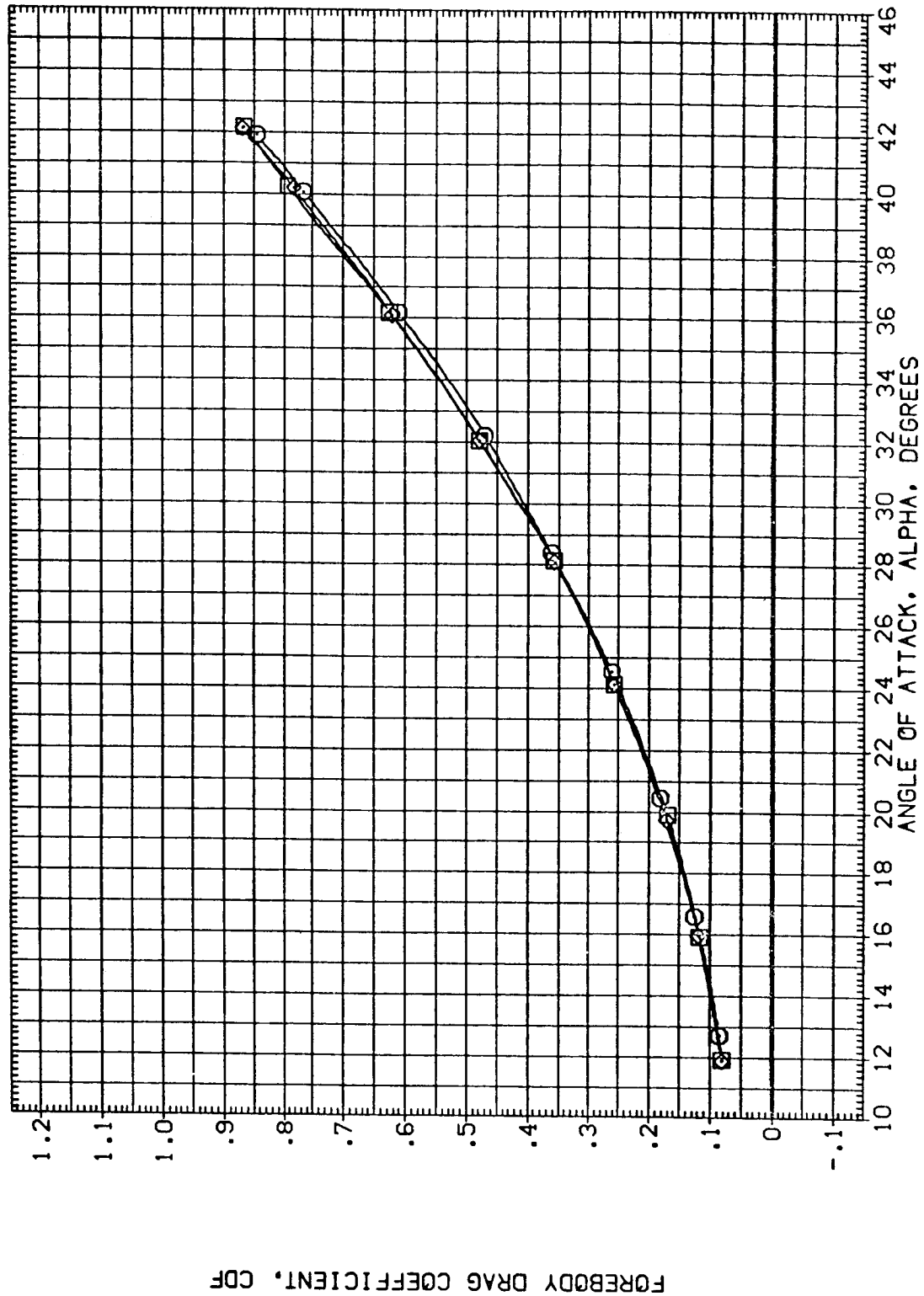


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEG002)	AMES 3.5-190 GA98 (011-M7+H14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEG010)	AMES 3.5-190 GA98 (011-M7+H14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EEG018)	AMES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

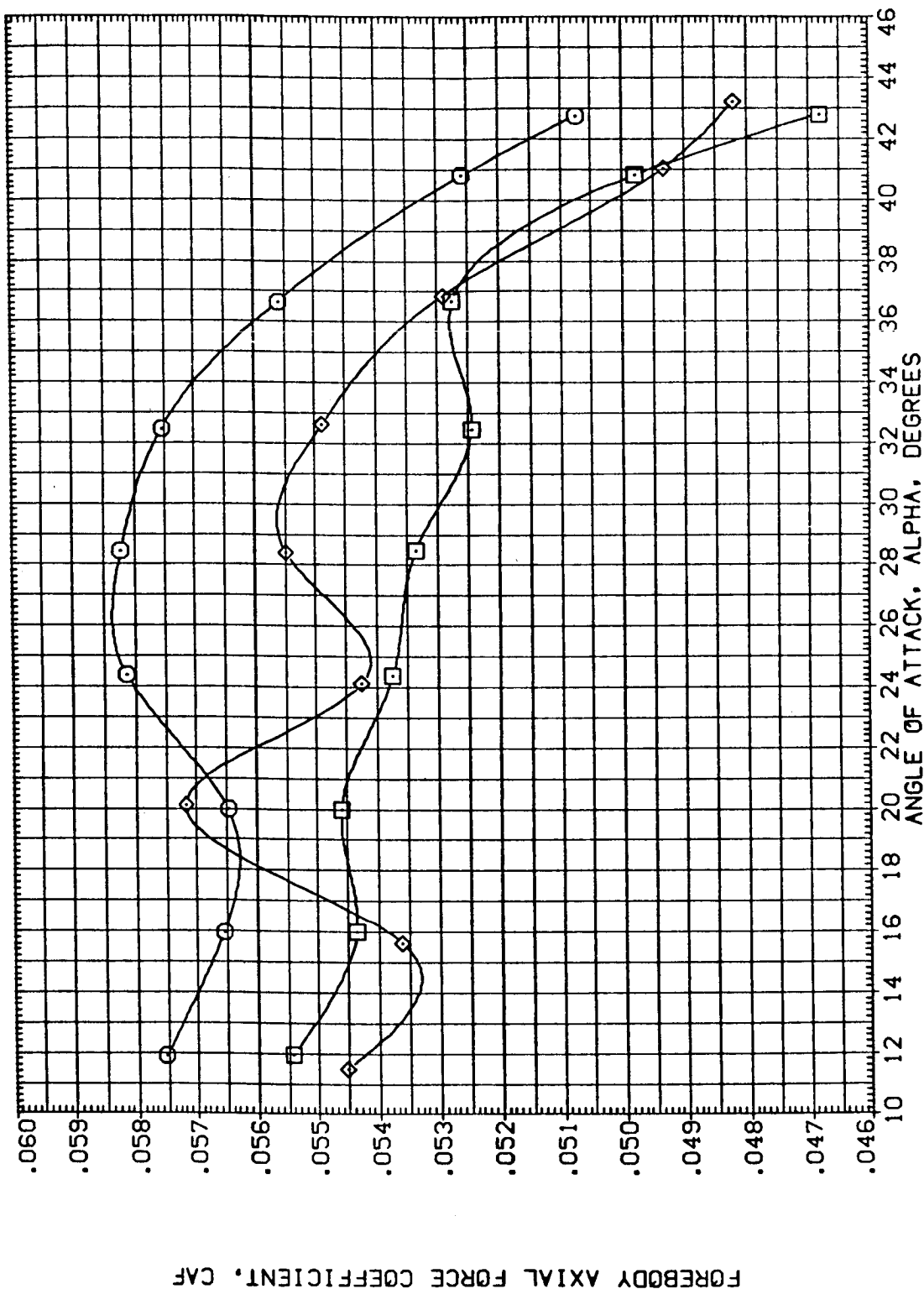


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 GA98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(EE0018)	AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

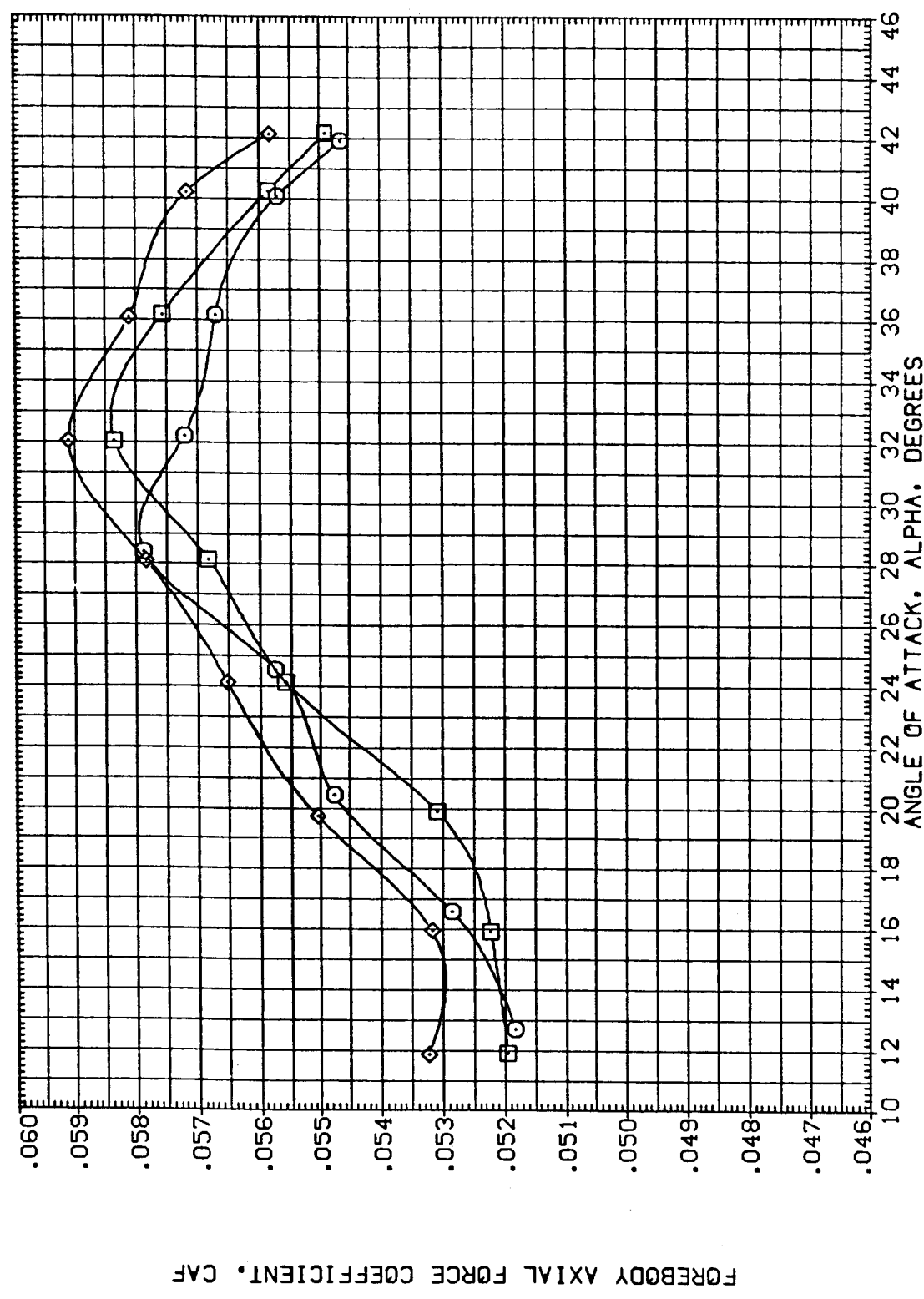


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0002)	AMES 3.5-190 DAS8 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000
(EE0010)	AMES 3.5-190 DAS8 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000
(EE0018)	AMES 3.5-190 DAS8 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800
						YMRP 1076.7000
						ZMRP .0000
						SCALE .0150

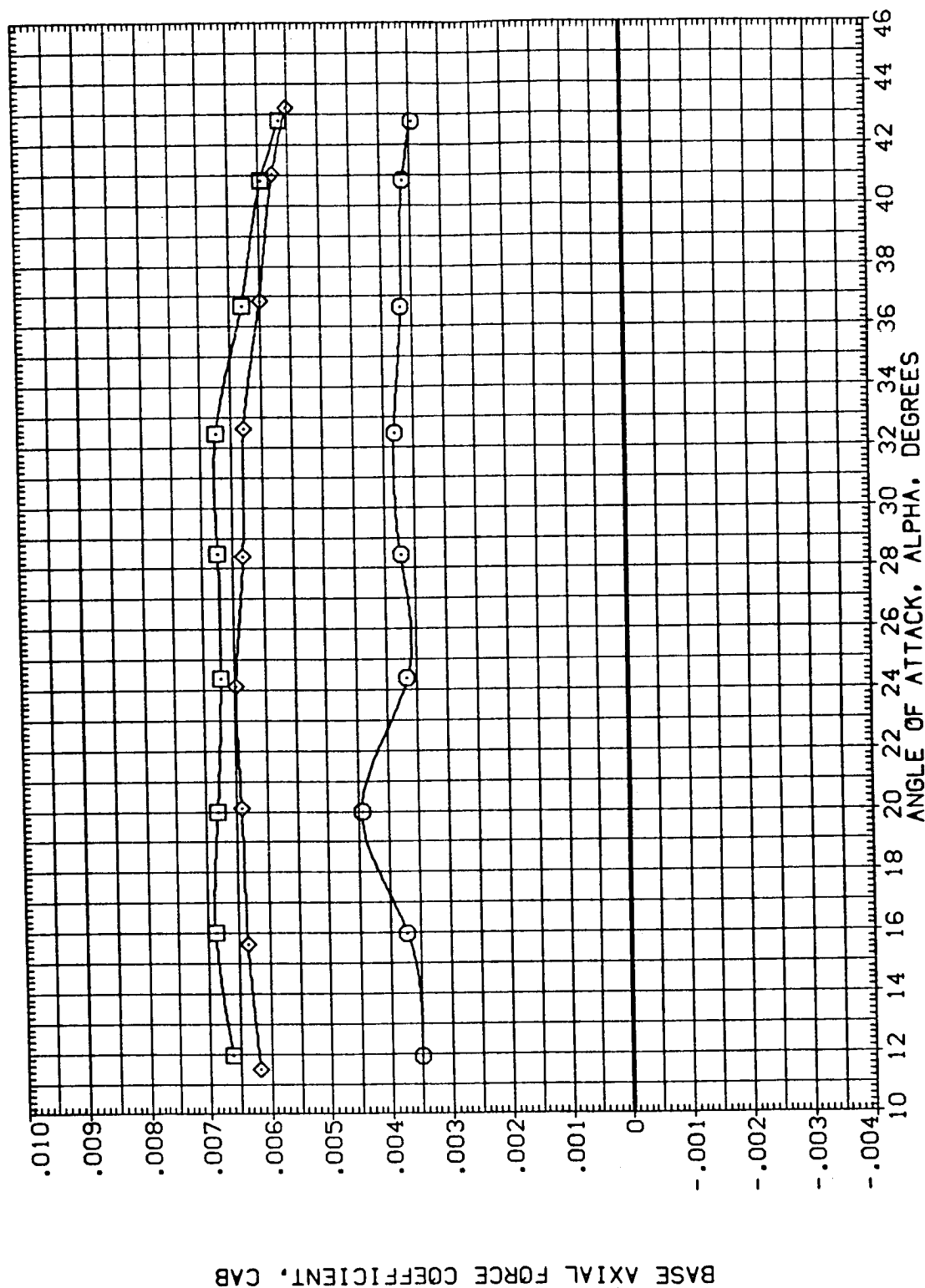


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION	
(EE0002)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(EE0010)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF	474.8000 IN.
(EE0018)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	-10.000	-11.700	55.000	BREF	936.6800 IN.
						XMRP	1076.7000 IN.X0
						YMRP	.0000 IN.Y0
						ZMRP	.0000 IN.Z0
						SCALE	.0150

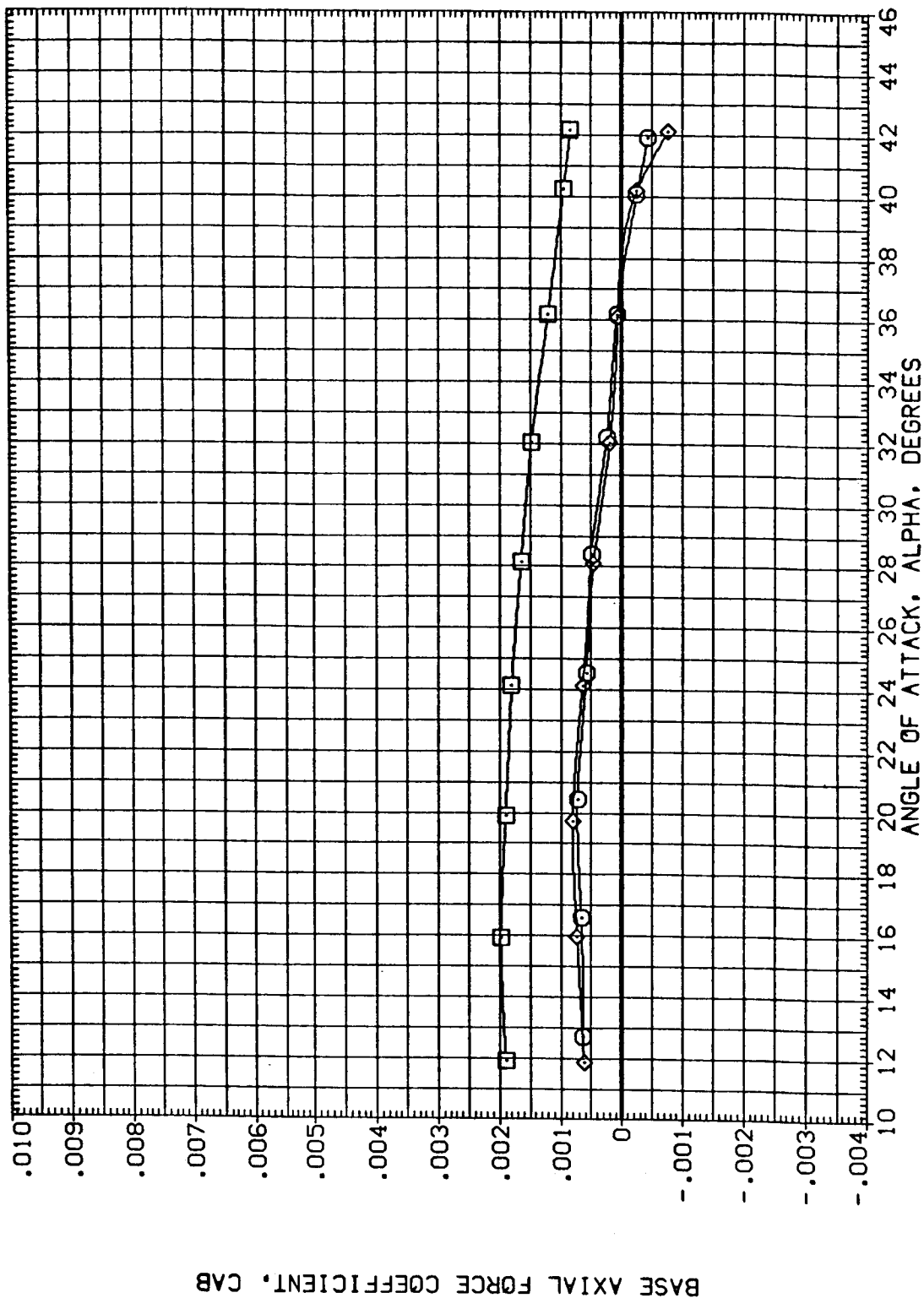


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(C)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(BEG002)	AVES 3.5-190 GA98 (011-M7+H14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEG010)	AVES 3.5-190 GA98 (011-M7+H14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BEG018)	AVES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP 375.0000 IN.Y0
						SCALE .0150

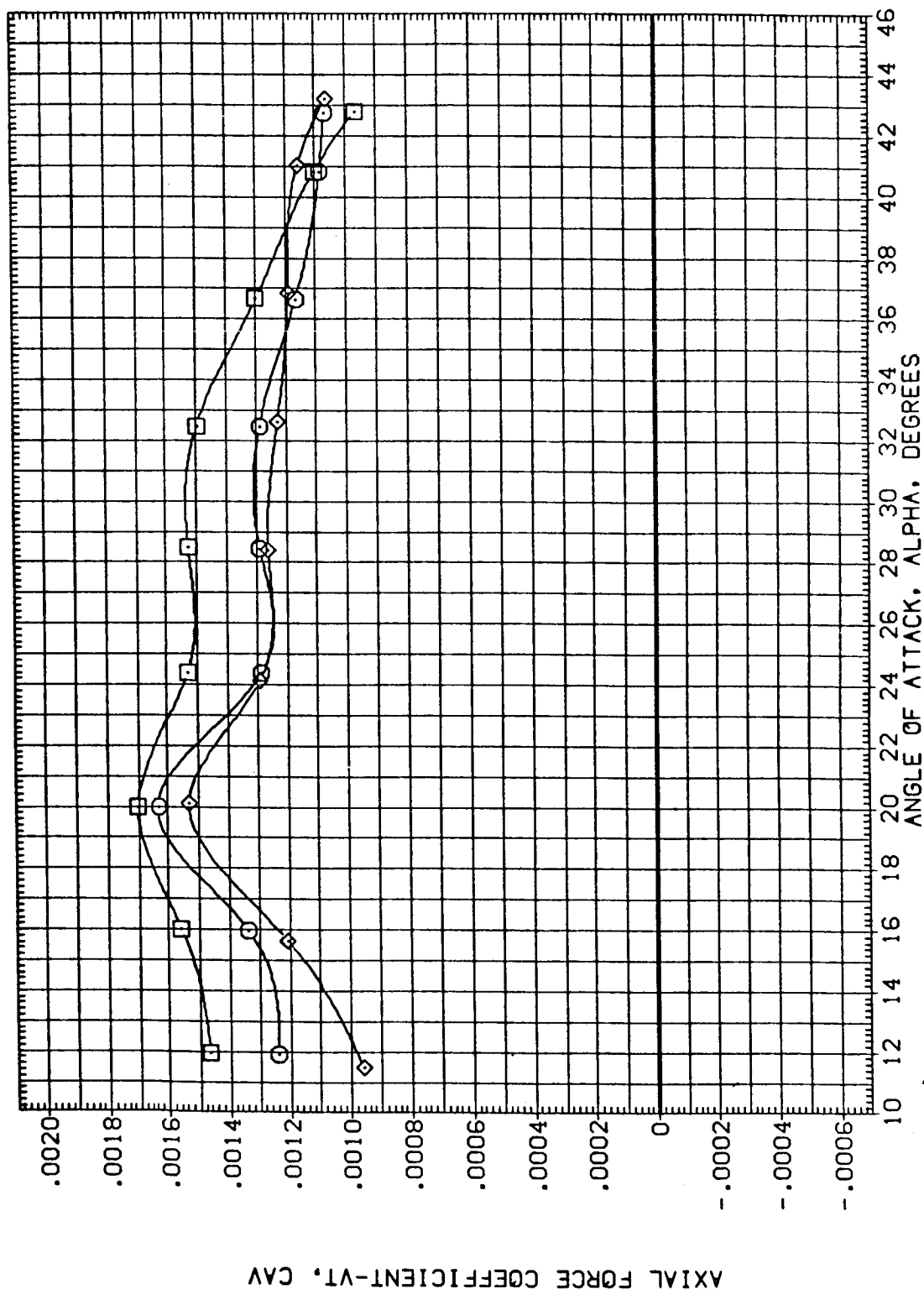


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0002)	AMES 3.5-190 GA98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0010)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BE0018)	AMES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE 375.0000 IN.Z0

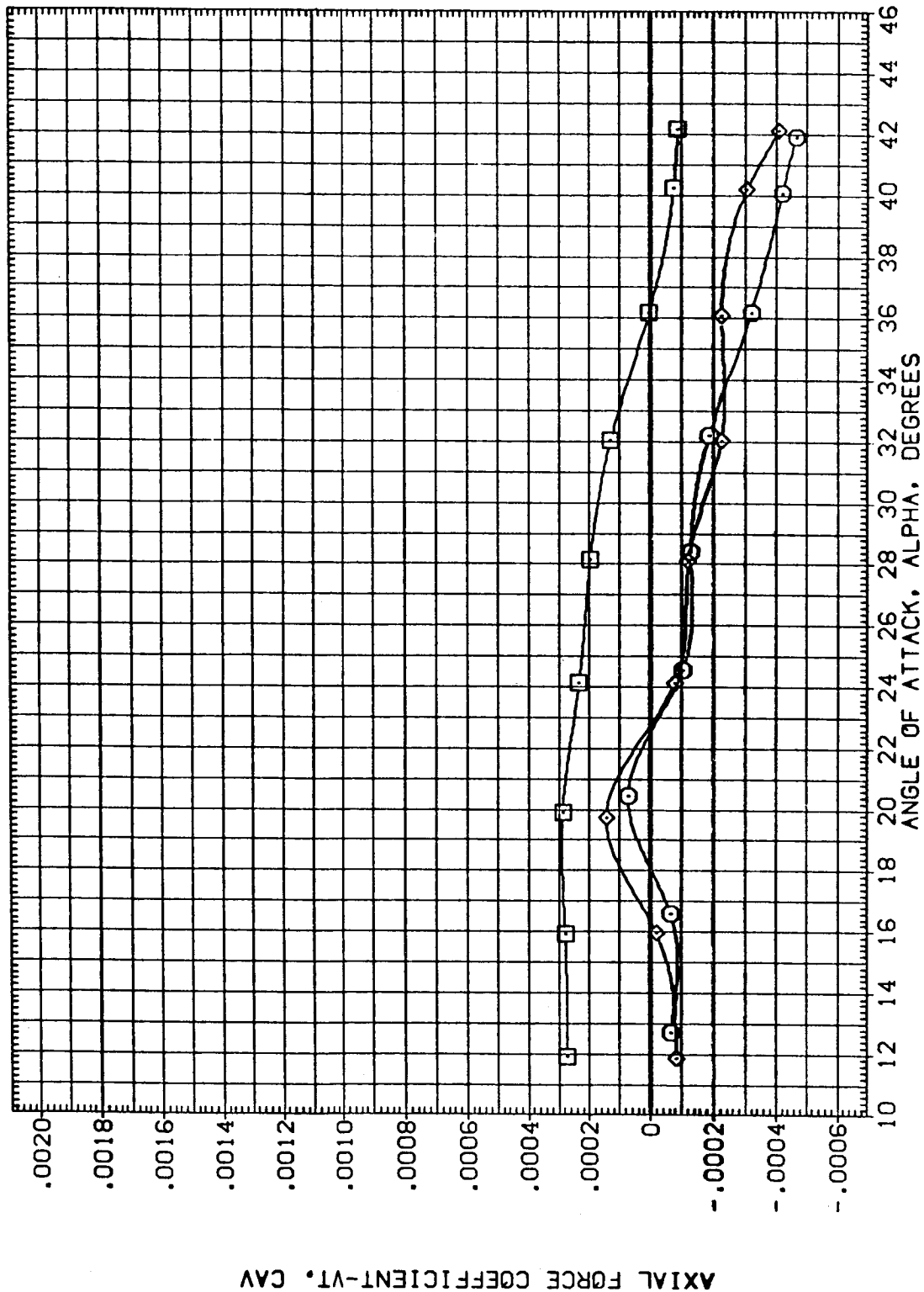


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVATION	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BEG002)	AMES 3.5-190 OA98 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEG010)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BEG018)	AMES 3.5-190 OA98 (011-M7-M14-N24-DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

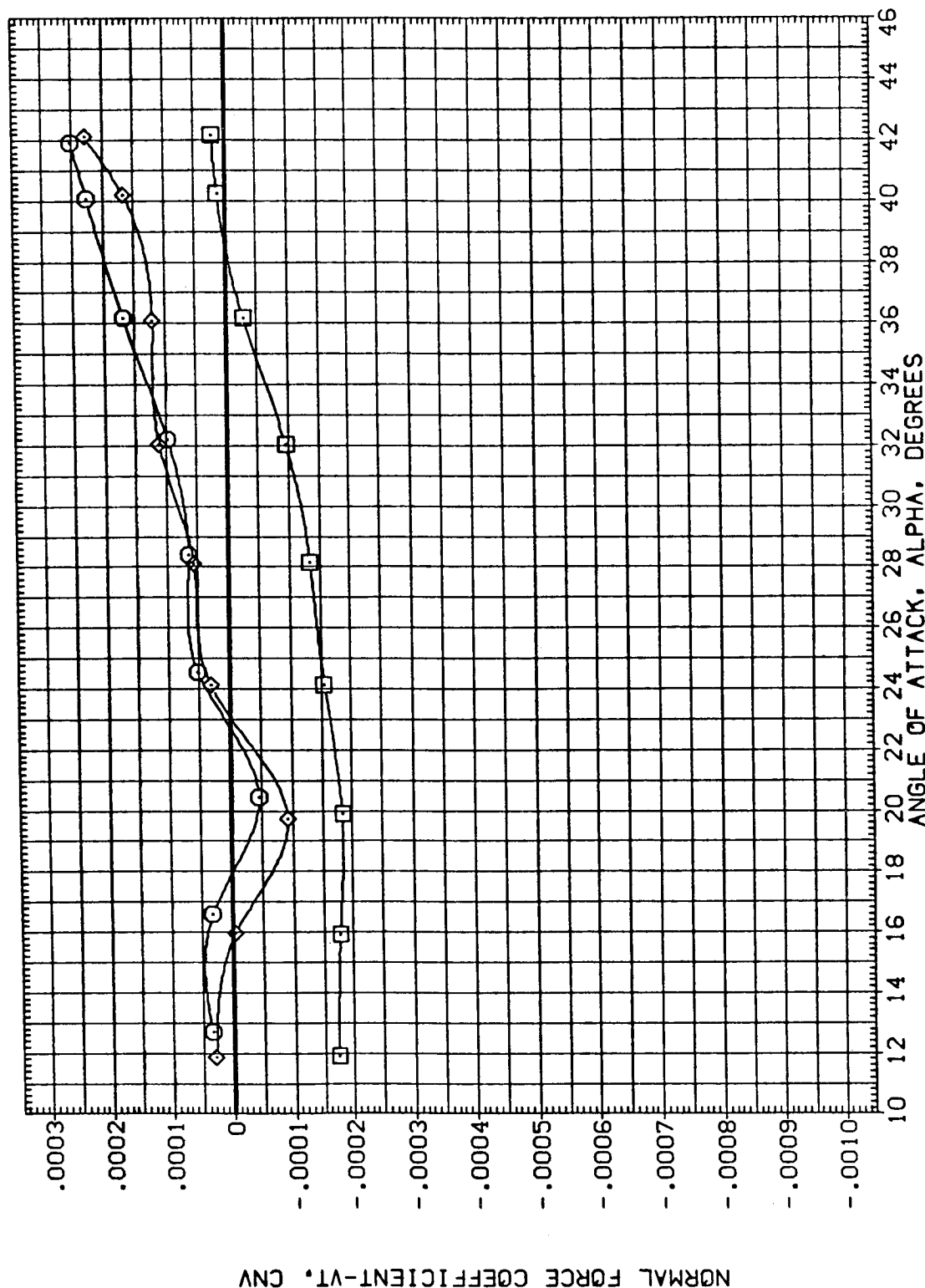


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(BE0002)	AVES 3.5-190 0A98 (011-17+M14)
(BE0010)	AVES 3.5-190 0A98 (011-17+M14-N24)
(BE0018)	AVES 3.5-190 0A98 (011-17+M14-N24+JUMPY STING)

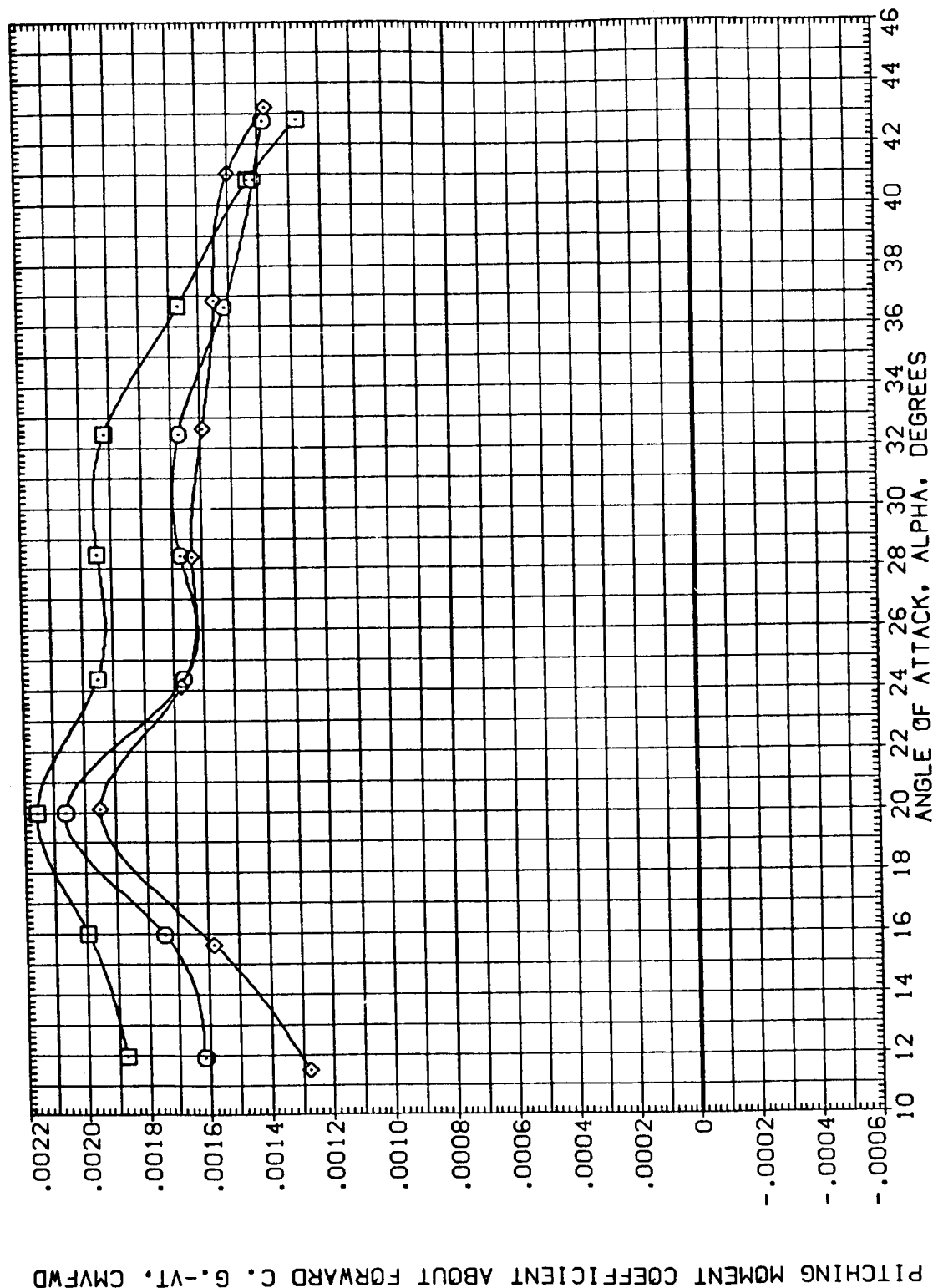
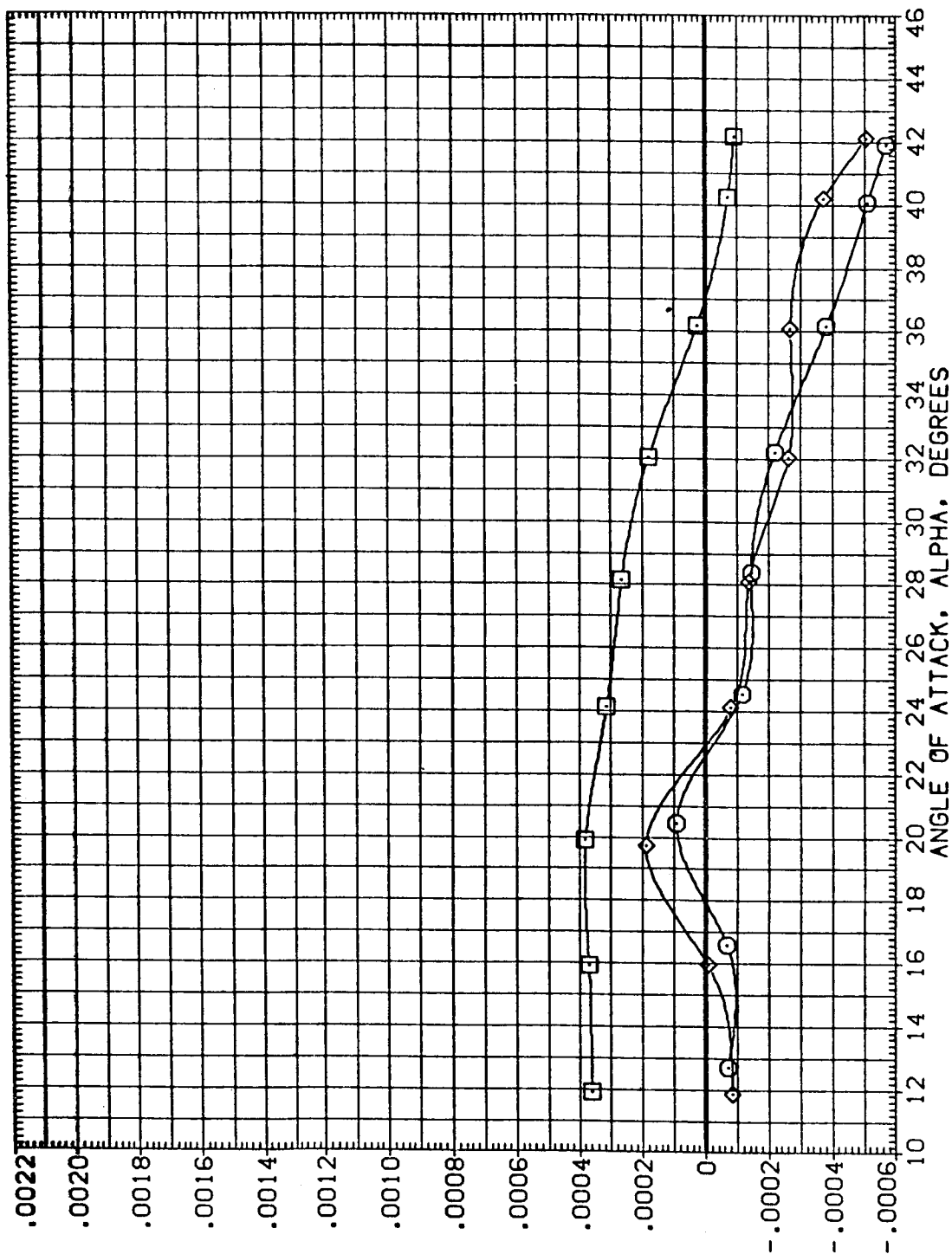


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

```
{A}MACH = 5.25
```

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C: 6.-VI, CMFWD



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
BE0002 )	ANES 3.5-190 0A98 (011-17+M14)
BE0010 )	ANES 3.5-190 0A98 (011-17+M14-N24)
BE0010 )	ANES 3.5-190 0A98 (011-17+M14-N24+CLIMMY STING)

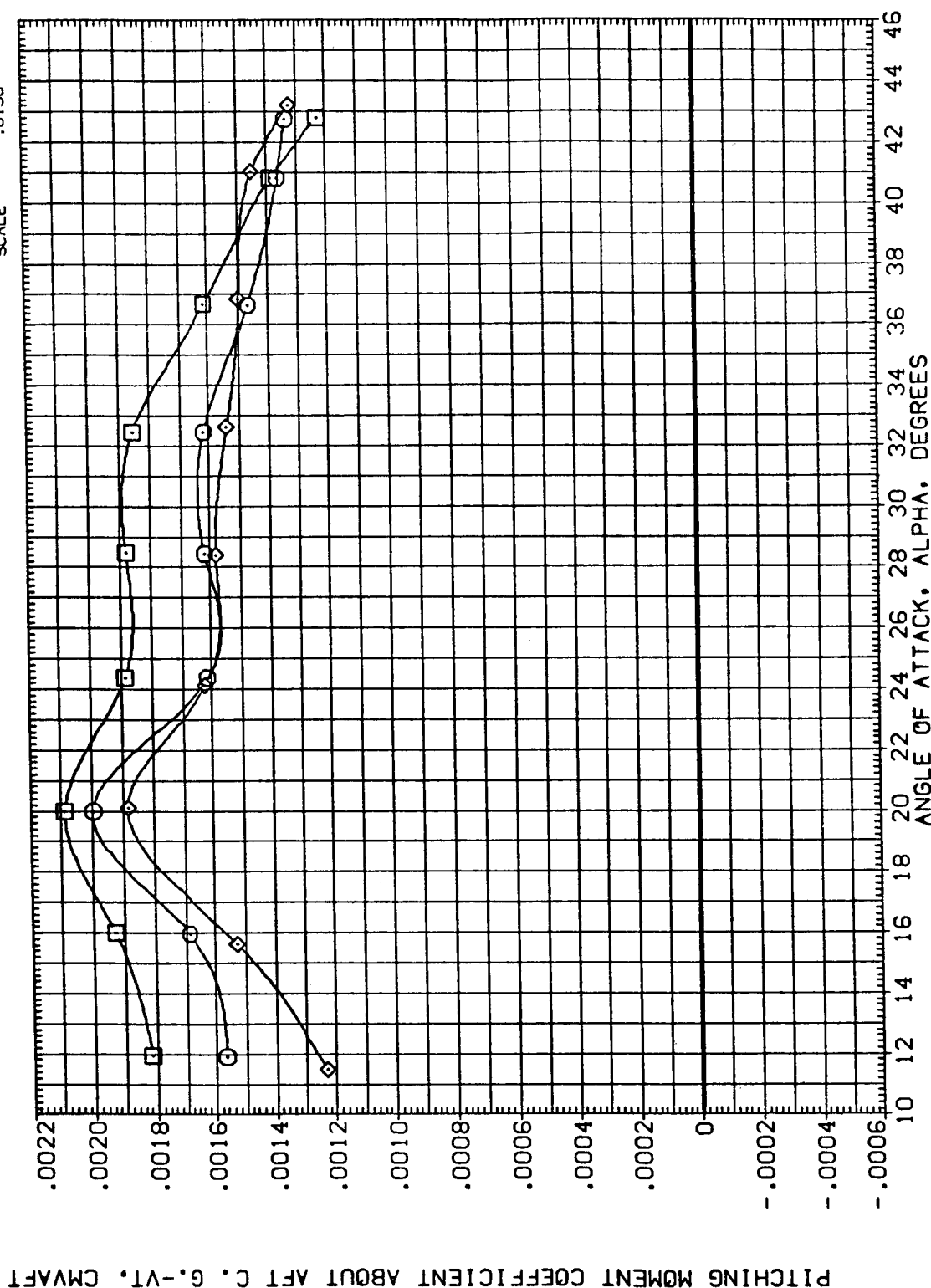


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

[A]MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0002)	AMES 3.5-190 GA98 (011-M7-H14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 50.FT.
(BE0010)	AMES 3.5-190 GA98 (011-M7-H14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(BE0018)	AMES 3.5-190 GA98 (011-M7-H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

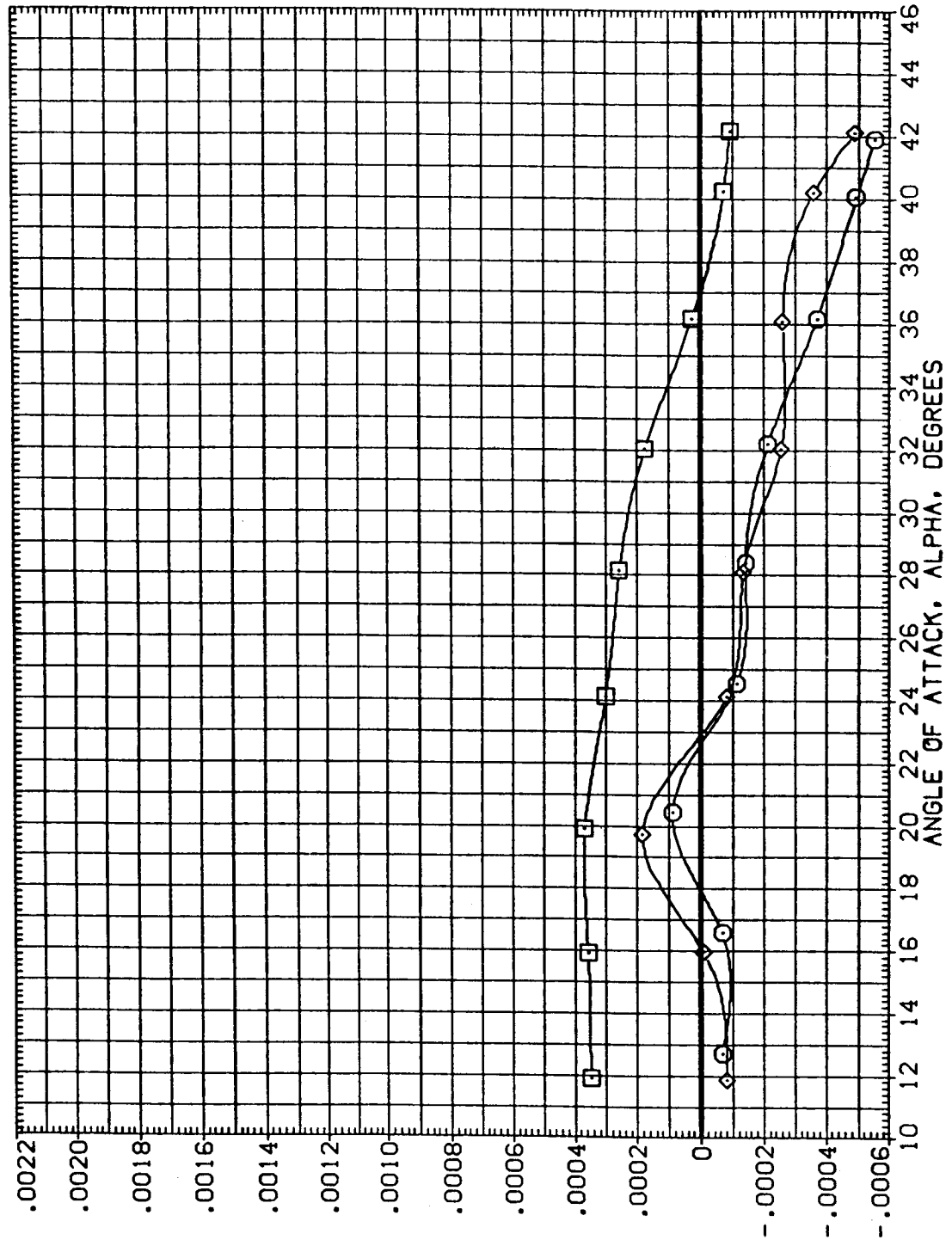


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(Y0010)  
(Y0018)

# CONFIGURATION DESCRIPTION

AMES 3.5-190 OA98 (011-47+114-N24)  
AMES 3.5-190 OA98 (011-47+114-N24+DUMMY STING)

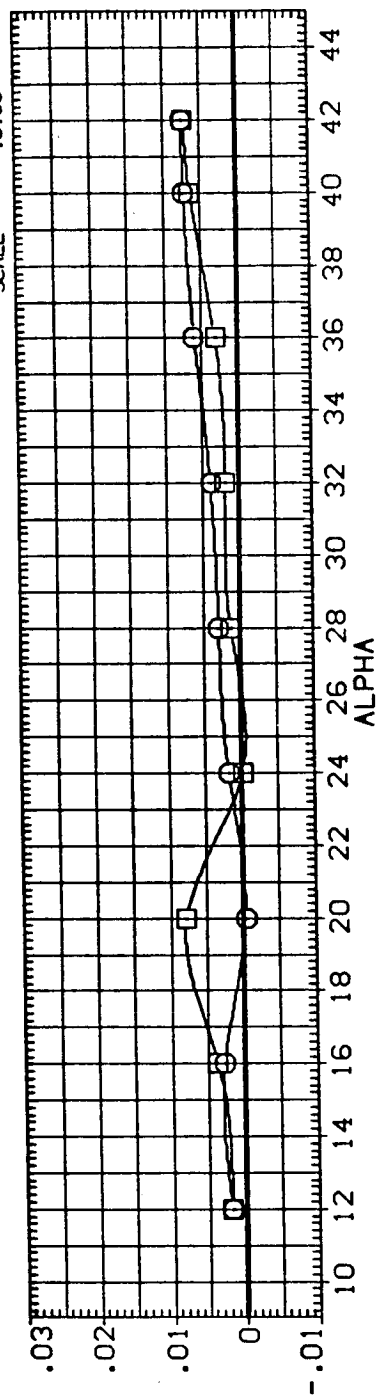
BETA  
.000  
.000

ELEVON  
-10.000  
-10.000

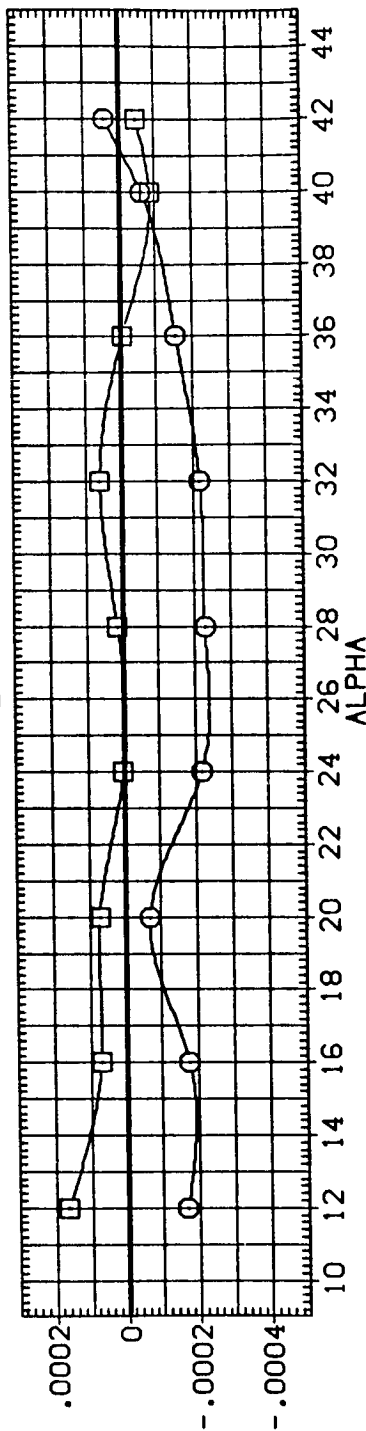
BOFLAP  
-11.700  
-11.700

SPOBRK  
55.000  
55.000

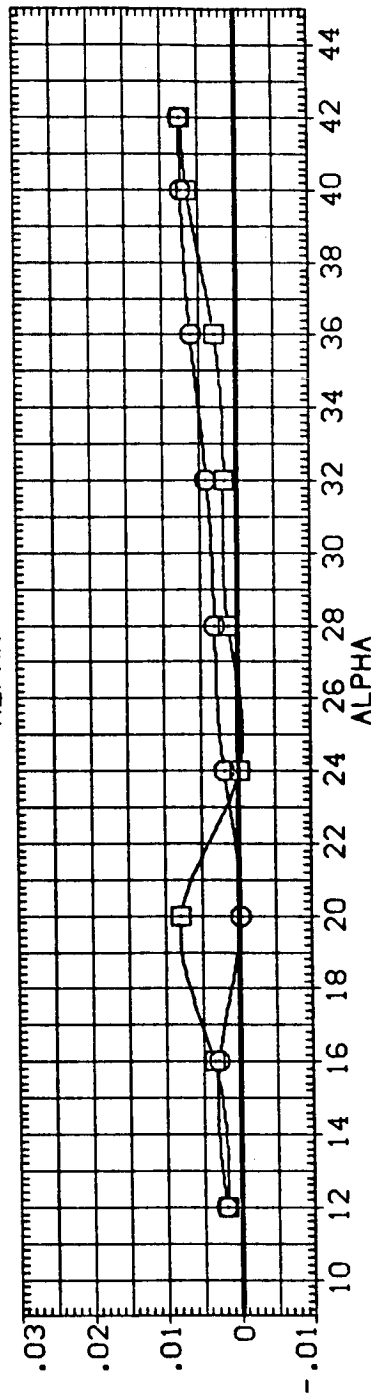
REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150



DCL



DCL



DCL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 5.30



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(YEO010)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(YEO018)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

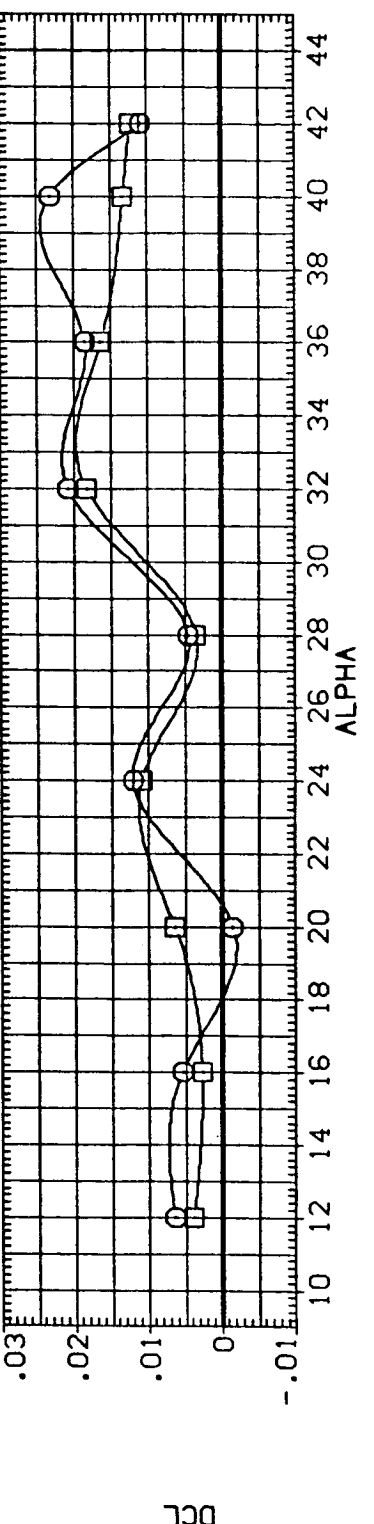
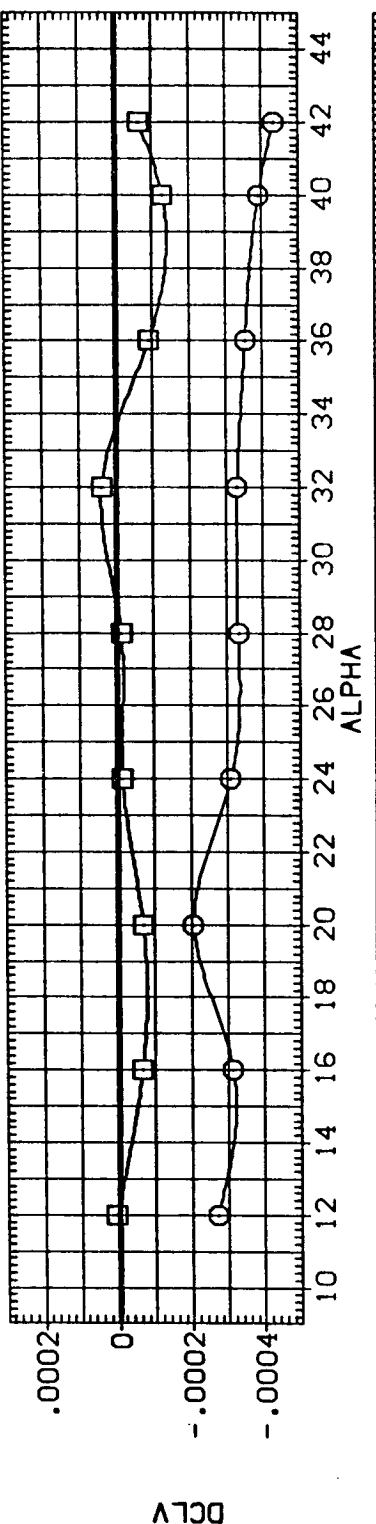
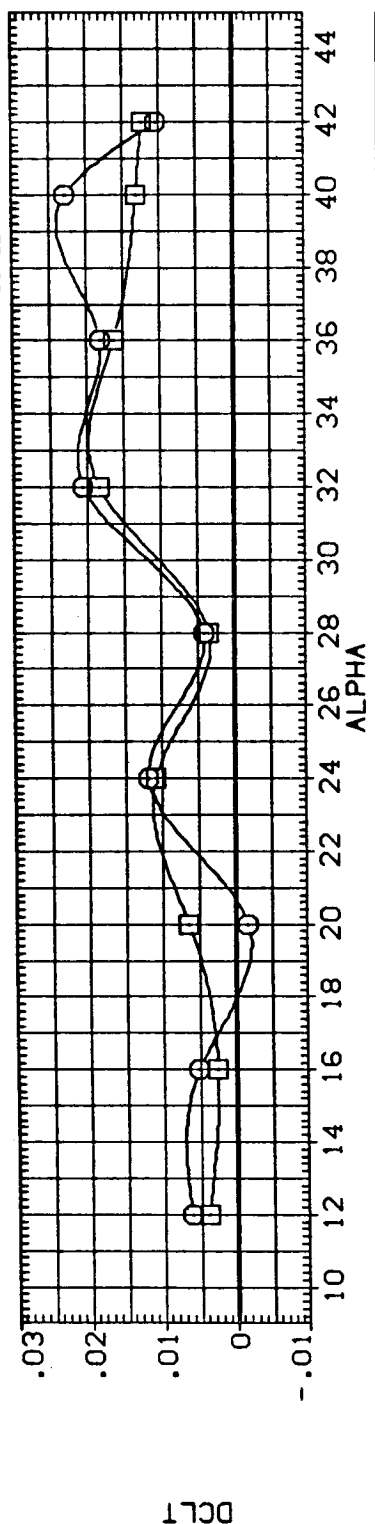


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(ZE0010)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(ZE0018)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMPP 1076.7000 IN. X0
						YMPP .0000 IN. Y0
						ZMPP 375.0000 IN. Z0
						SCALE .0150

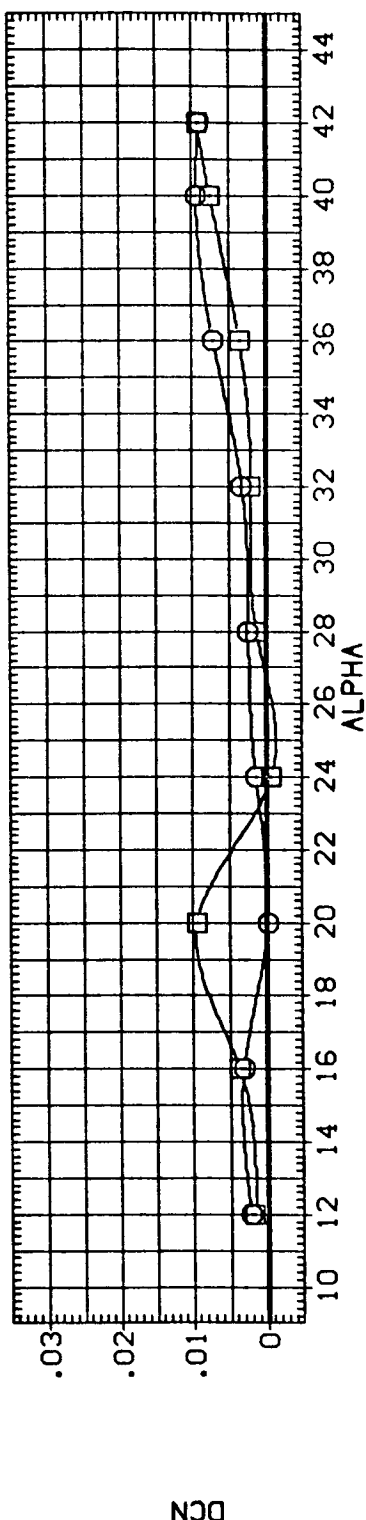
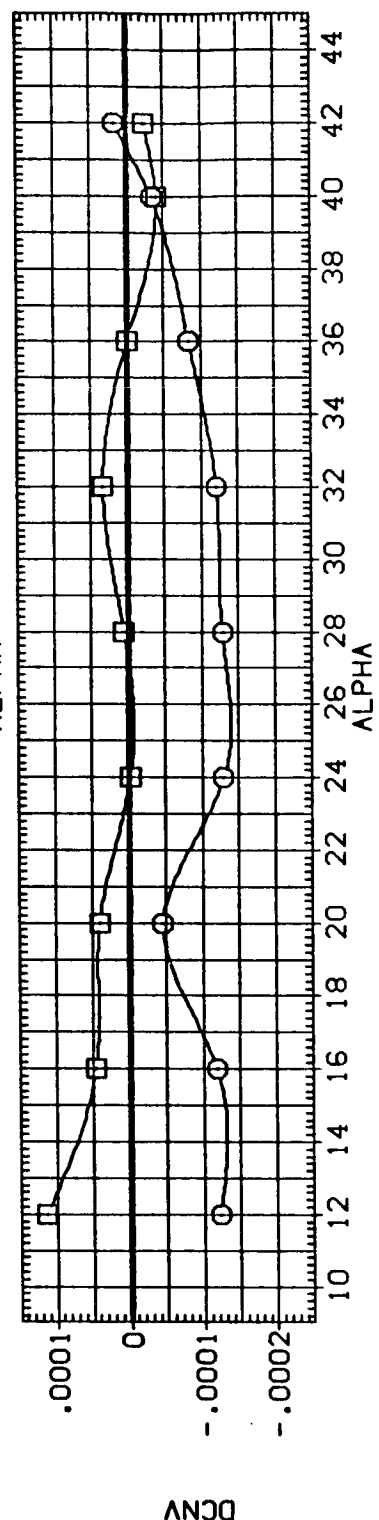
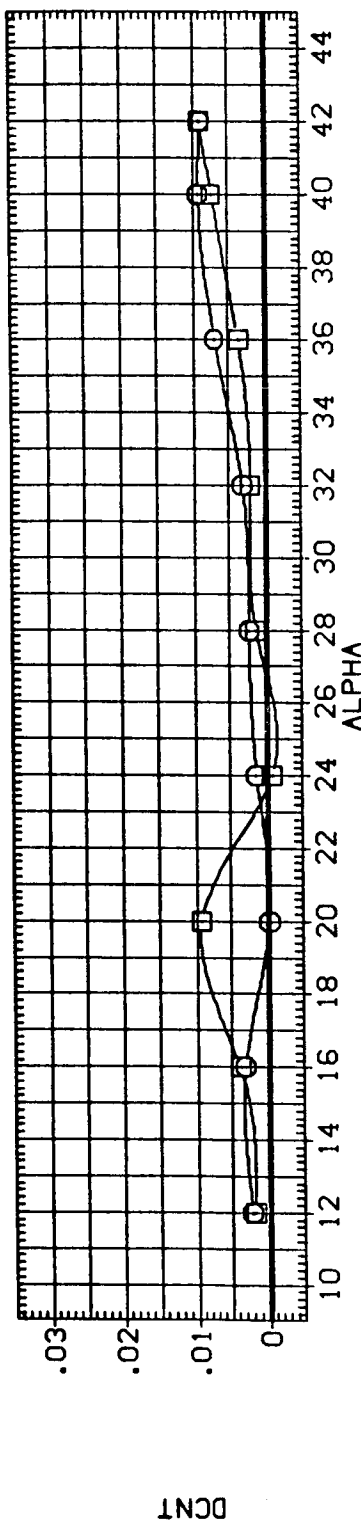


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL: (ZE0010) (ZE0018)

CONFIGURATION DESCRIPTION: AVES 3.5-190 0A98 (011-M7+M14-N24) AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA: .000 .000

ELEVON: -10.000 -10.000

BOFLAP: -11.700 -11.700

SPOBRK: 55.000 55.000

REFERENCE INFORMATION: SREF 2690.0000 50.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.XD YMRP .0000 IN.YD ZMRP 375.0000 IN.ZD SCALE .0150

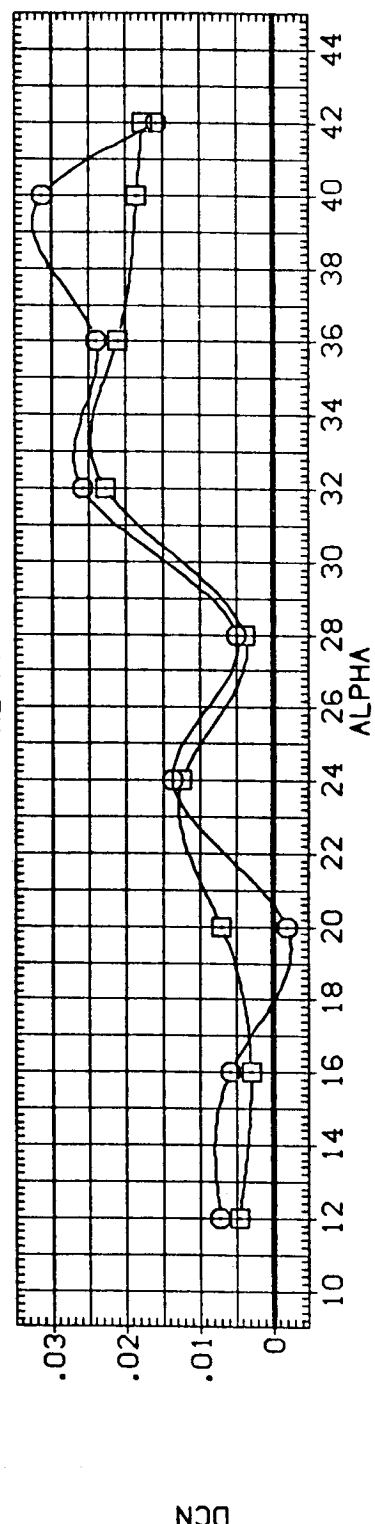
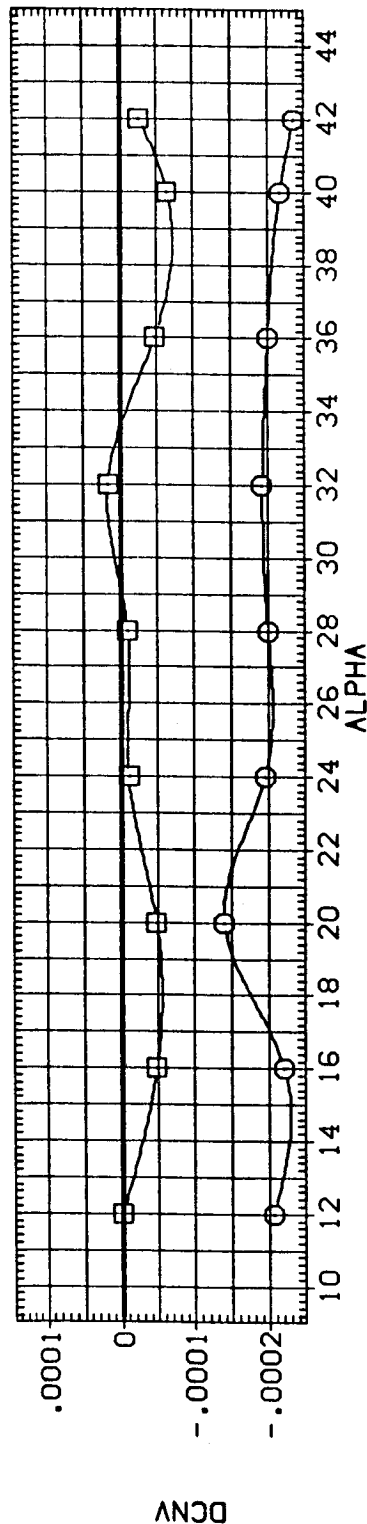
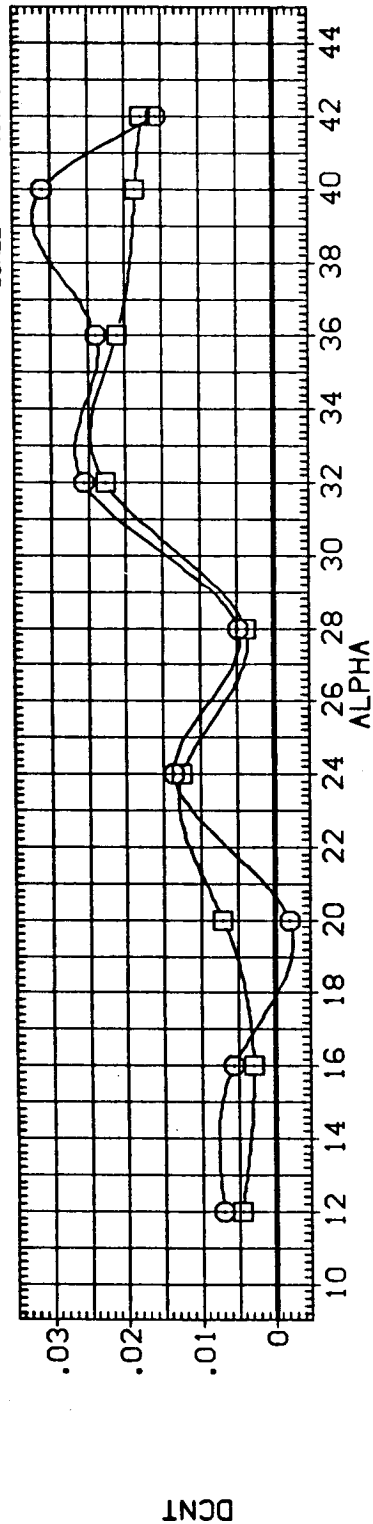


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (ZE0010) (ZE0018)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-M7+M14-N24)  
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000  
 ELEVON -10.000  
 BOFLAP -11.700  
 SPOBRK 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 50. FT.  
 LREF 474.6000 IN.  
 BREF 936.6000 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

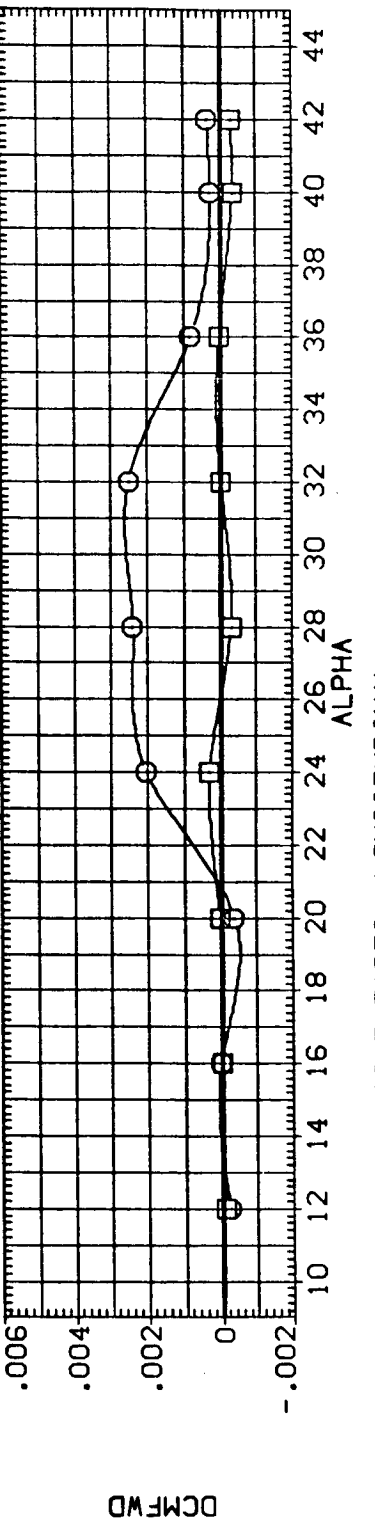
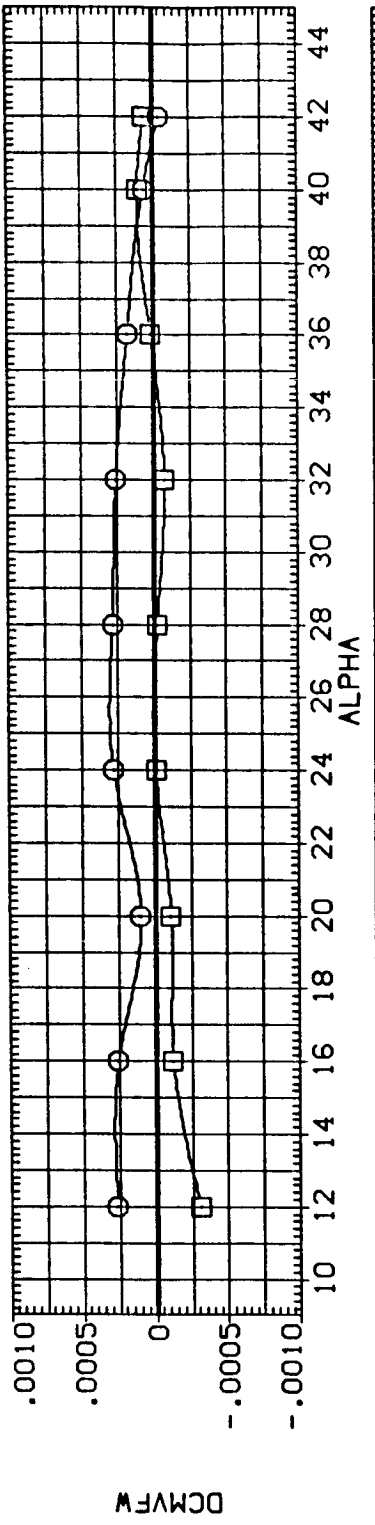
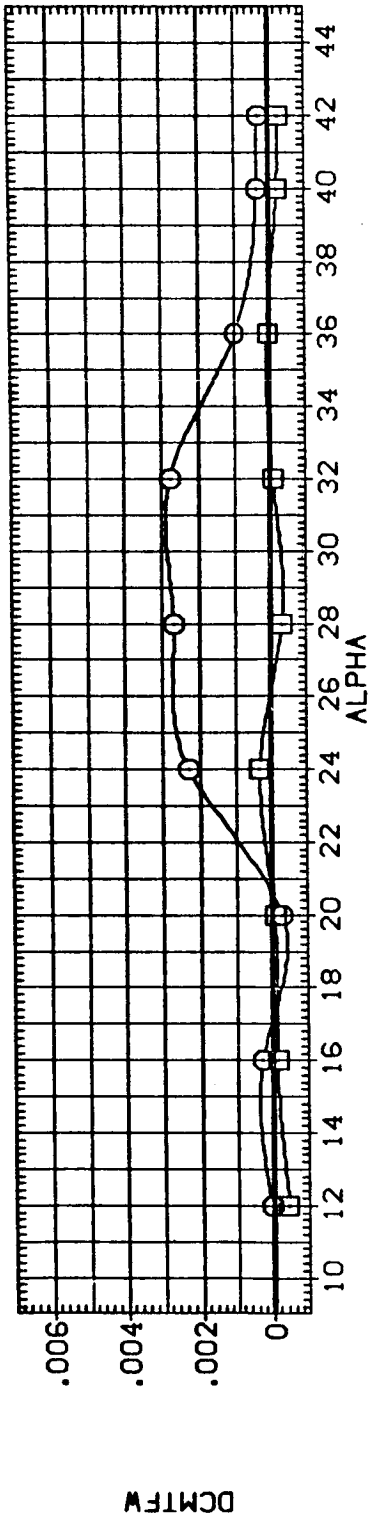


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(ZE0010)	AVES 3.5-190 0A98 (011-M7-H14-N24)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(ZE0018)	AVES 3.5-190 0A98 (011-M7-H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

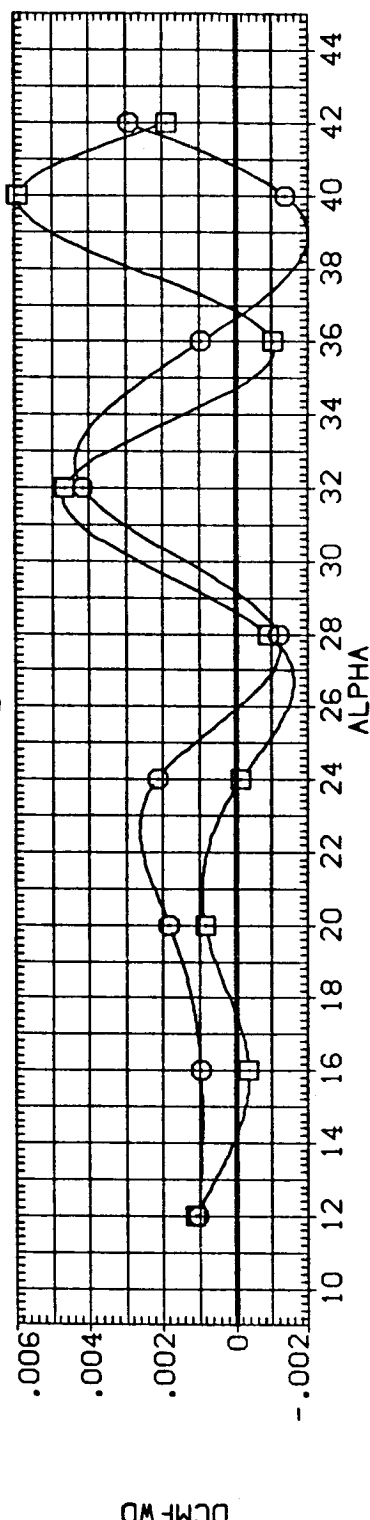
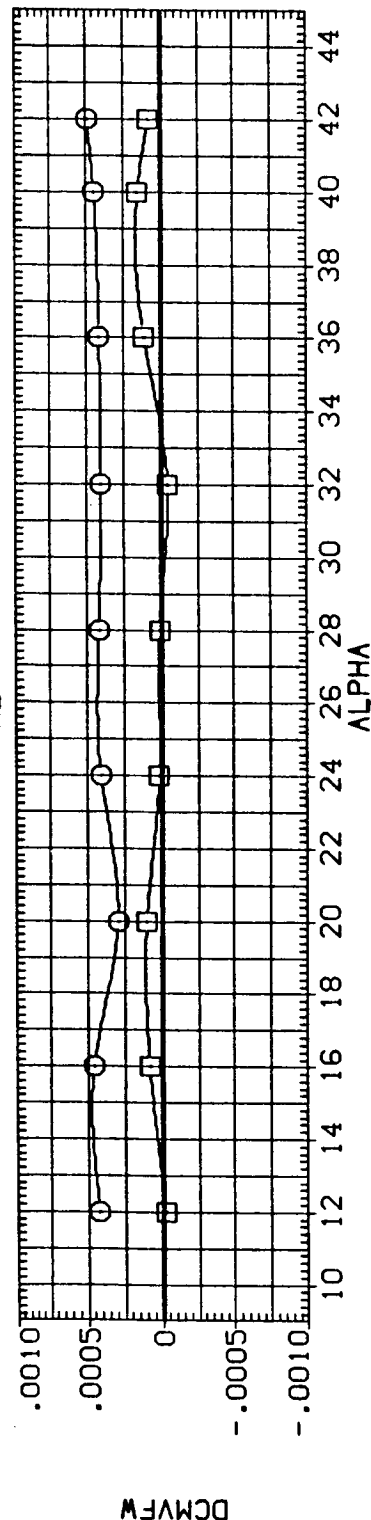
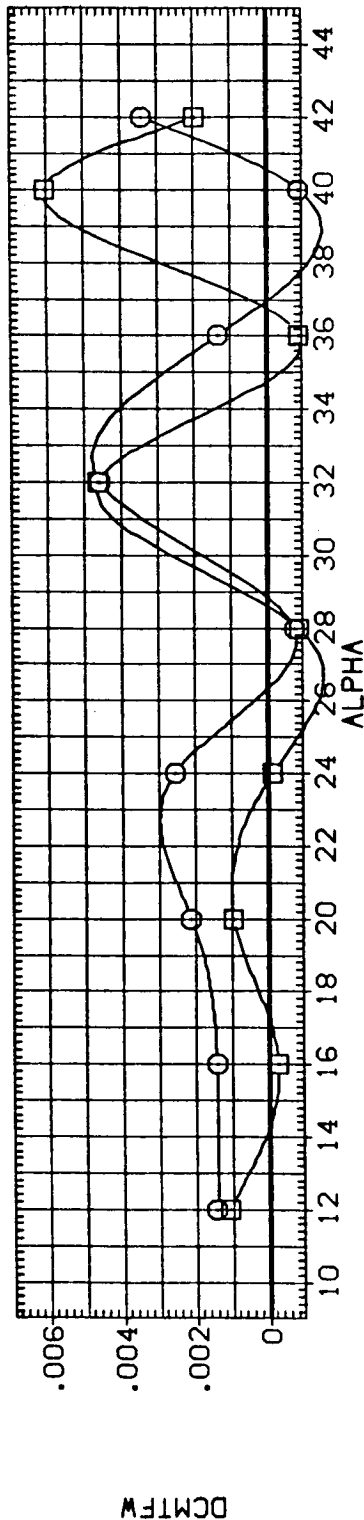


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION	
(ZE0010)	□	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(ZE0018)	□	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF	474.8000 IN.
							BREF	936.6800 IN.
							XMRP	1076.7000 IN.X0
							YMRP	.0000 IN.Y0
							ZMRP	375.0000 IN.Z0
							SCALE	.0150

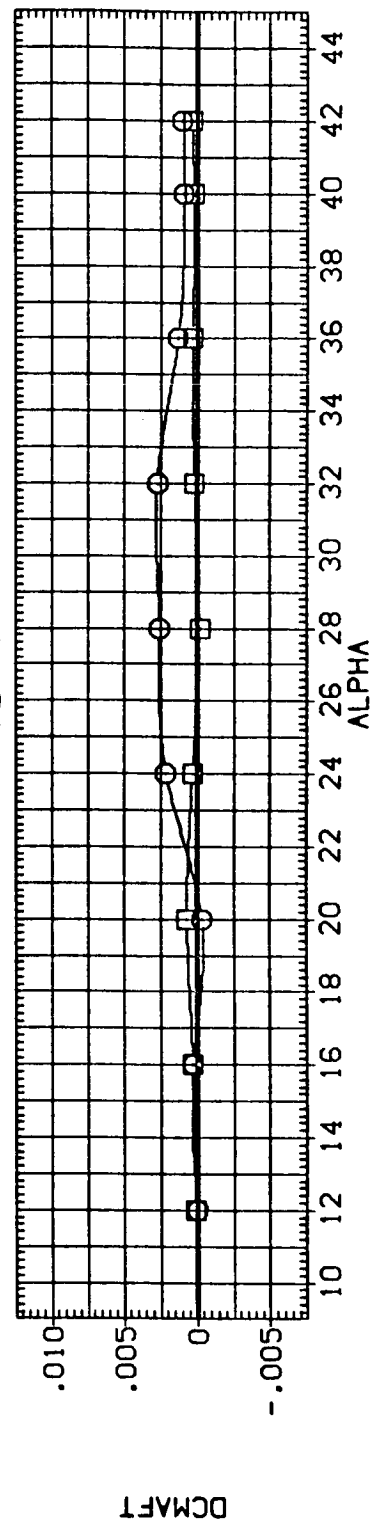
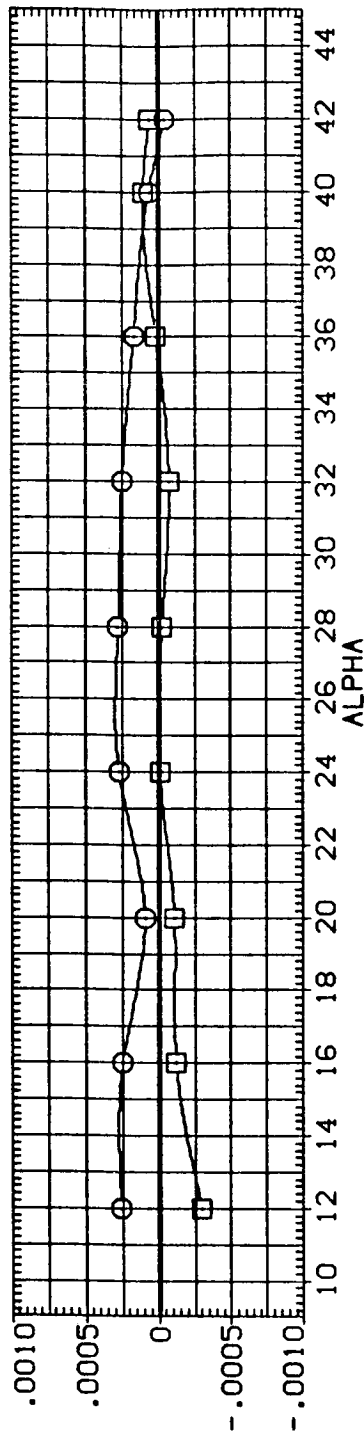
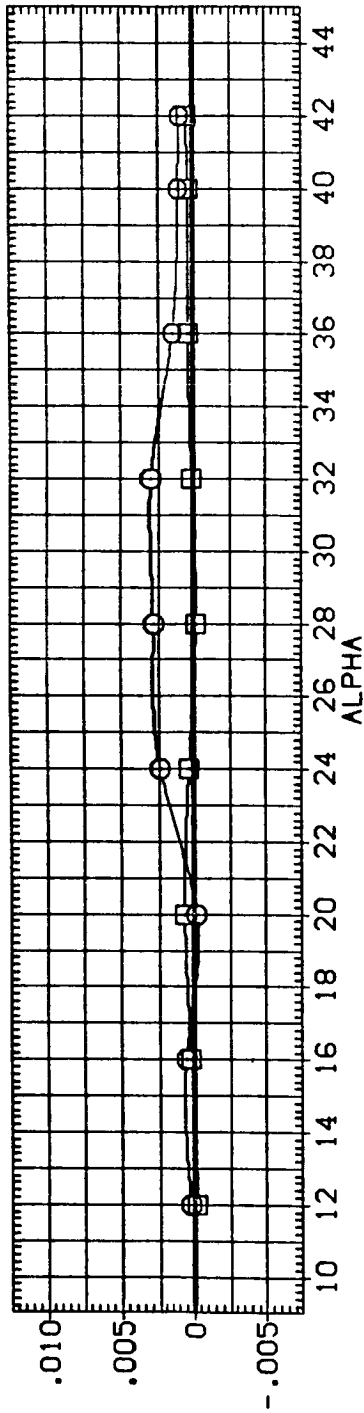


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30



DATA SET SYMBOL    CONFIGURATION DESCRIPTION    BETA    ELEVON    BOFLAP    SPDBRK    REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(ZEG010)	AVES 3.5-190 0A98 (011-H7+H14-N24)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(ZEG018)	AVES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

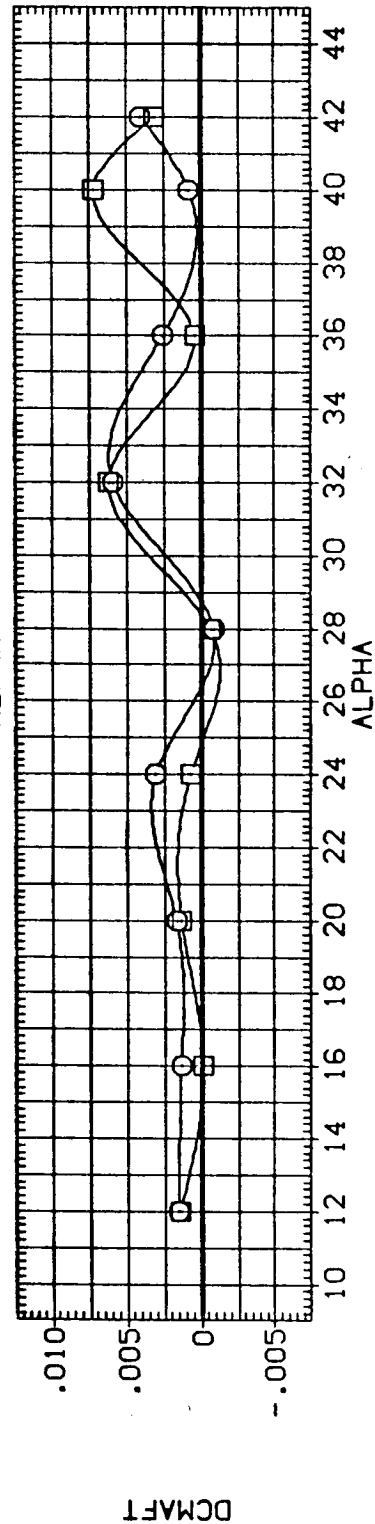
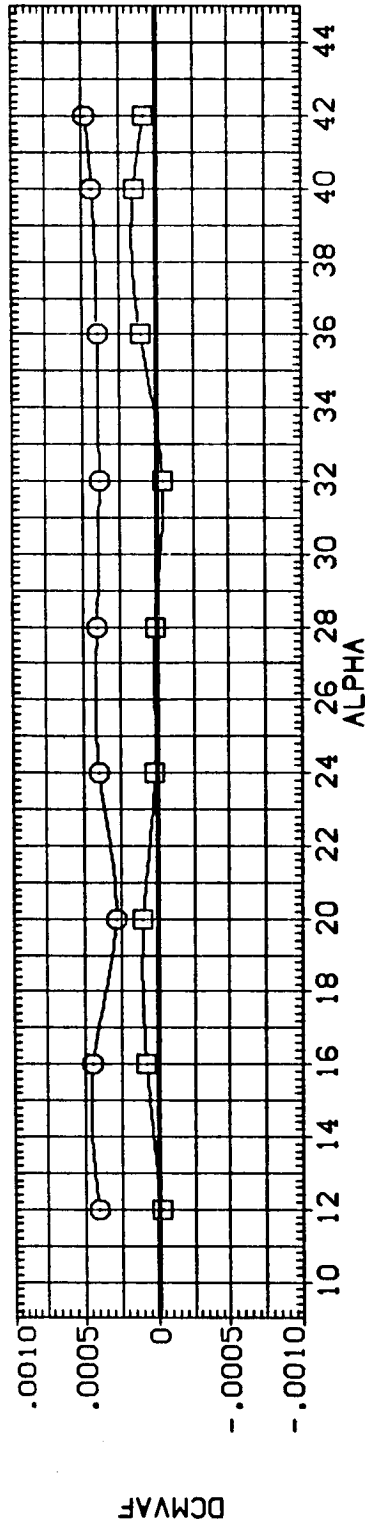
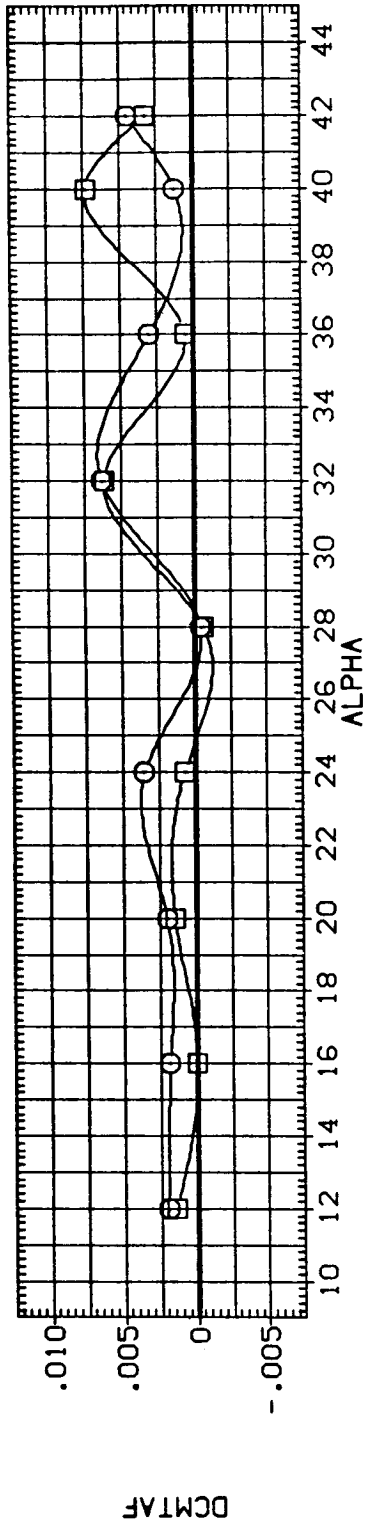


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL  
(1E0010)  
(1E0018)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7+M14-N24)  
AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
-10.000  
-10.000

BOFLAP  
-11.700  
-11.700

SPOBRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SO.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.XG  
YMRP .0000 IN.YG  
ZMRP 375.0000 IN.ZG  
SCALE .0150

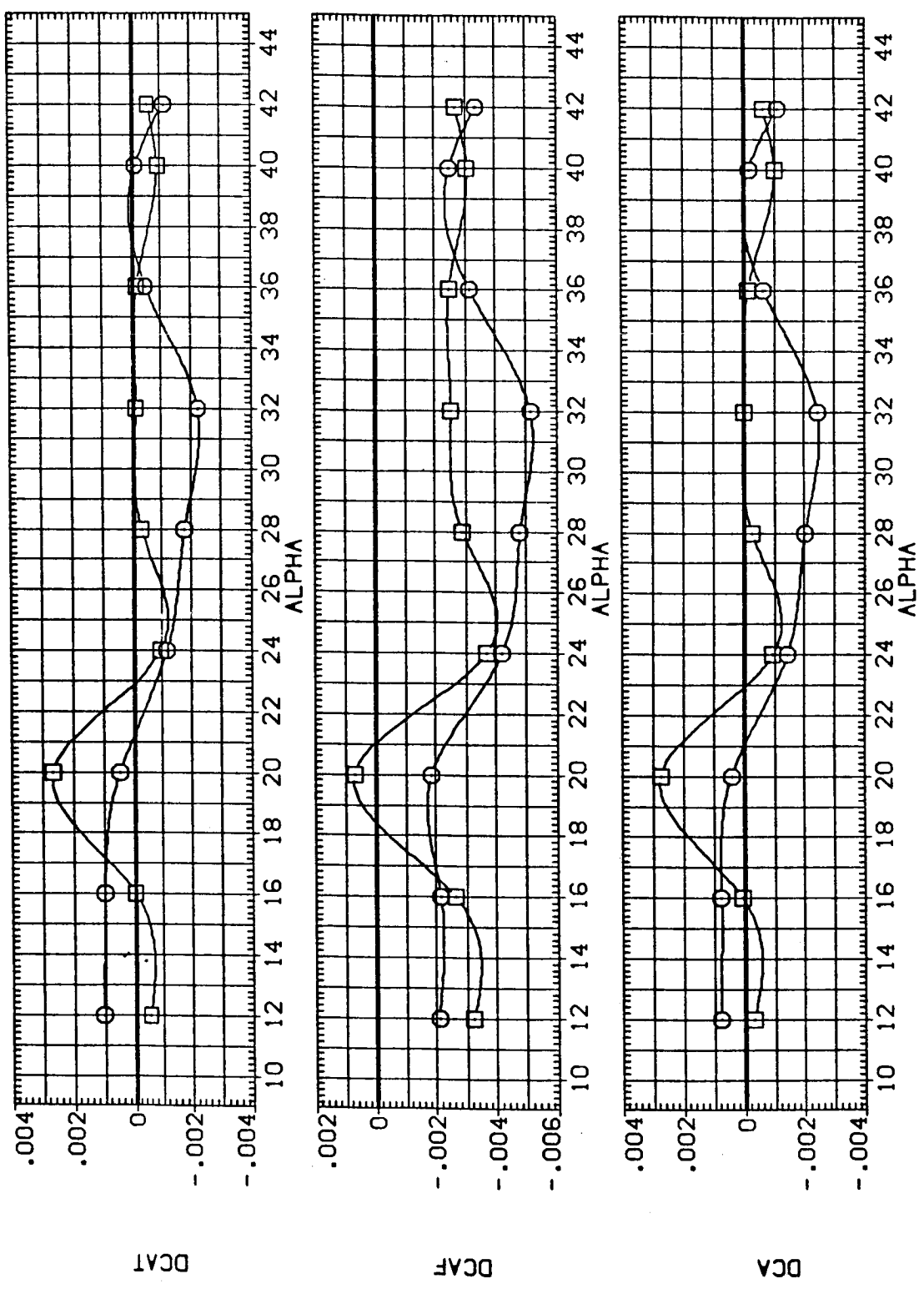


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(1E0010) AMES 3.5-190 0A98 (011-M7+M14-N24)

(1E0018) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA

.000

.000

ELEVON

-10.000

-10.000

BOFLAP

-11.700

-11.700

SPOBRK

55.000

55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

YMRP 1076.7000 IN.X0

ZMRP .0000 IN.Y0

SCALE 375.0000 IN.Z0

.0150

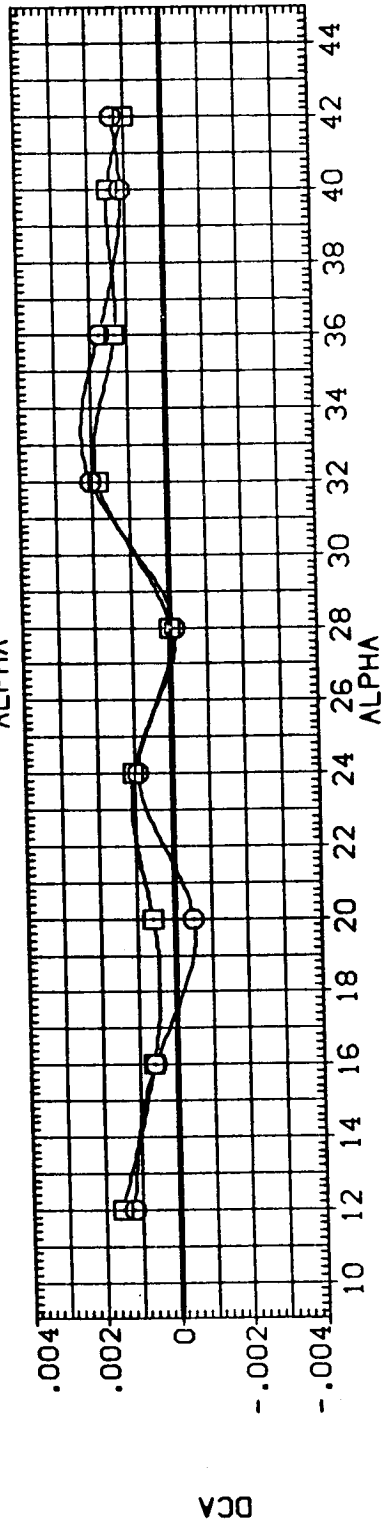
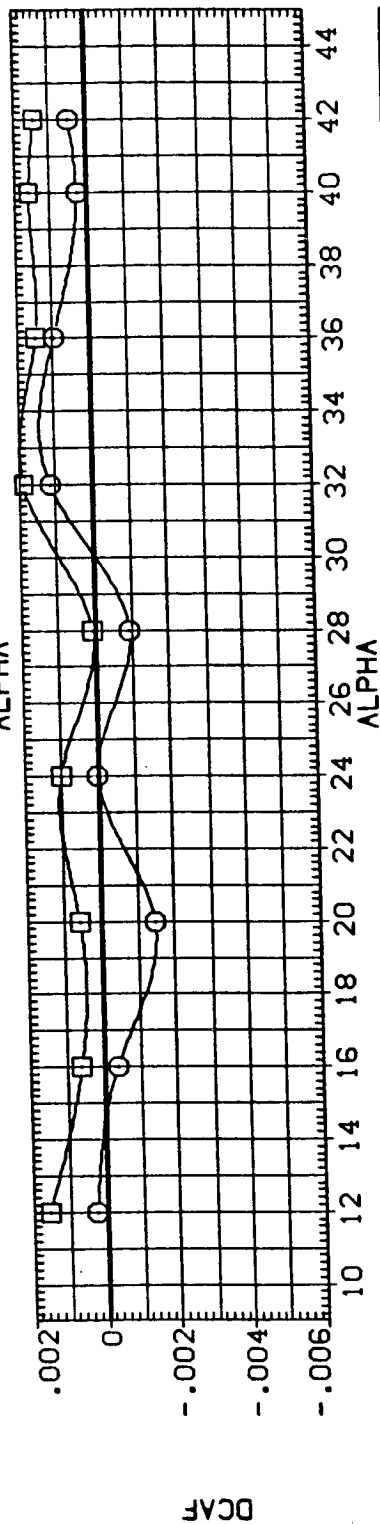
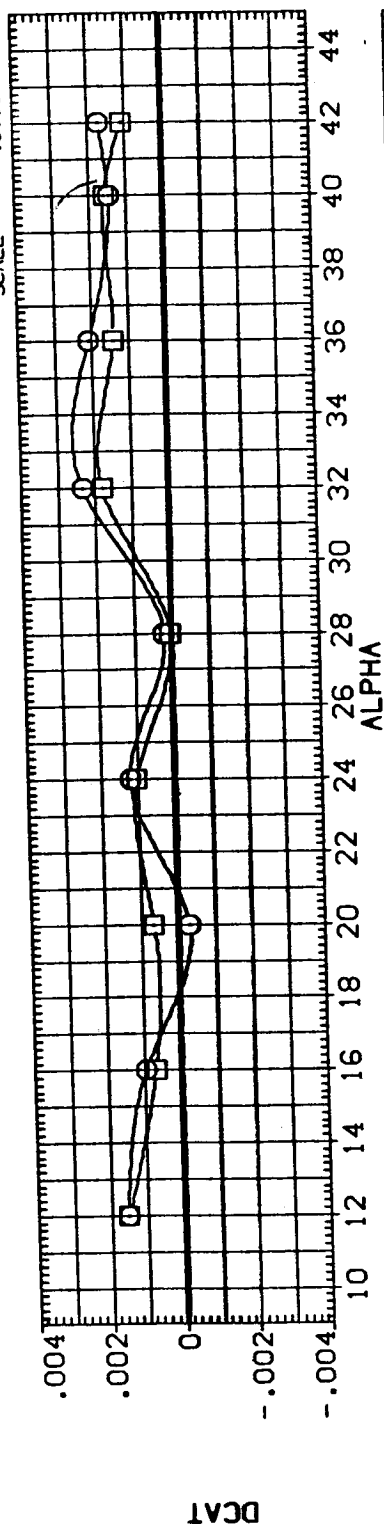


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL  
(1EQ010)  
(1EQ018)

CONFIGURATION DESCRIPTION

AMES 3.5-190 OAS8 (011-M7-M14-N24)  
AMES 3.5-190 OAS8 (011-M7-M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
-10.000  
-10.000

BOFLAP  
-11.700  
-11.700

SPDBRX  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

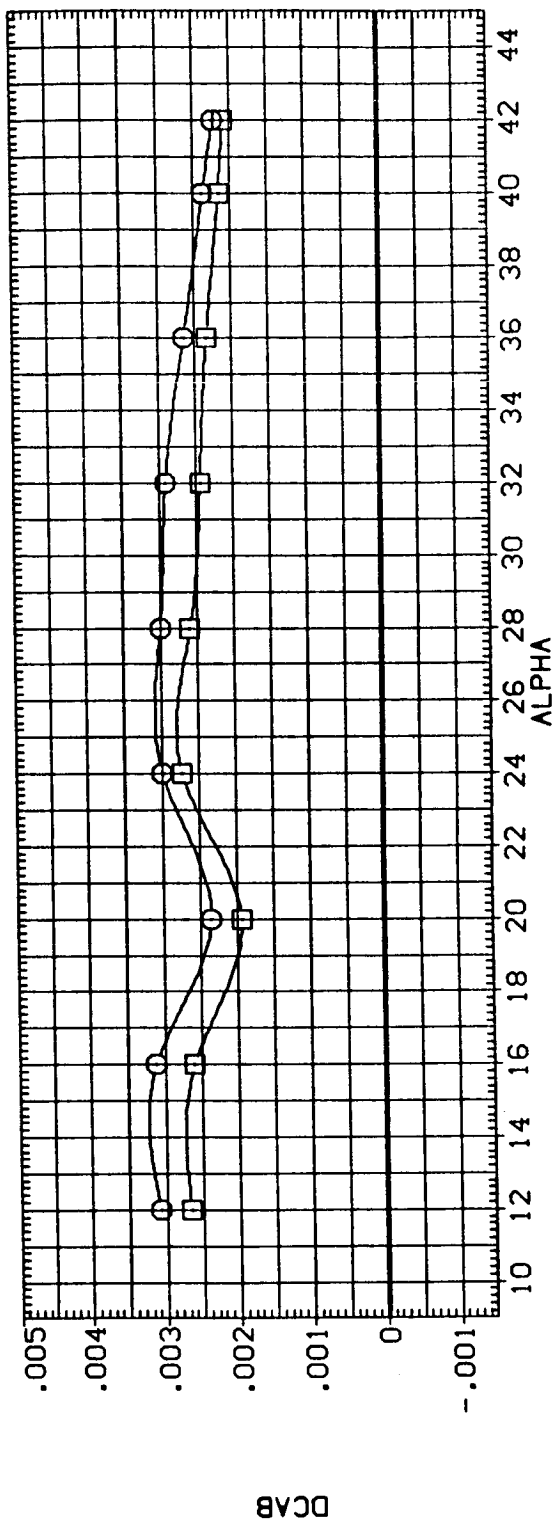
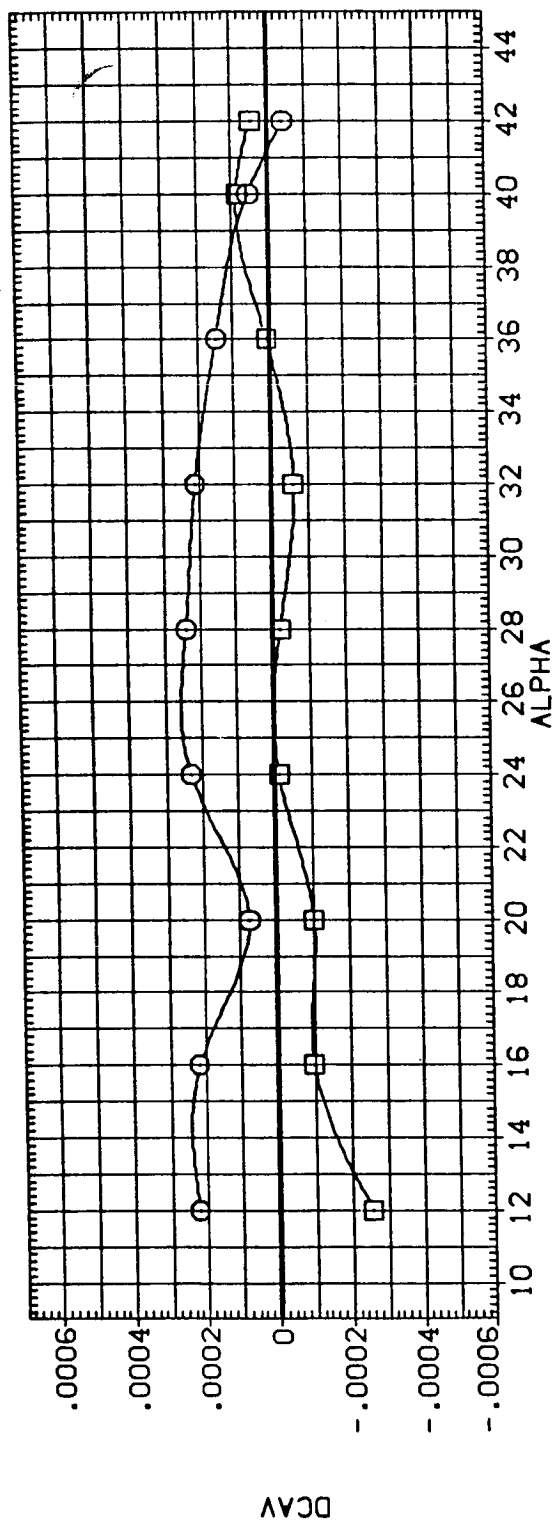


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(1E0010)	AVES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(1E0018)	AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

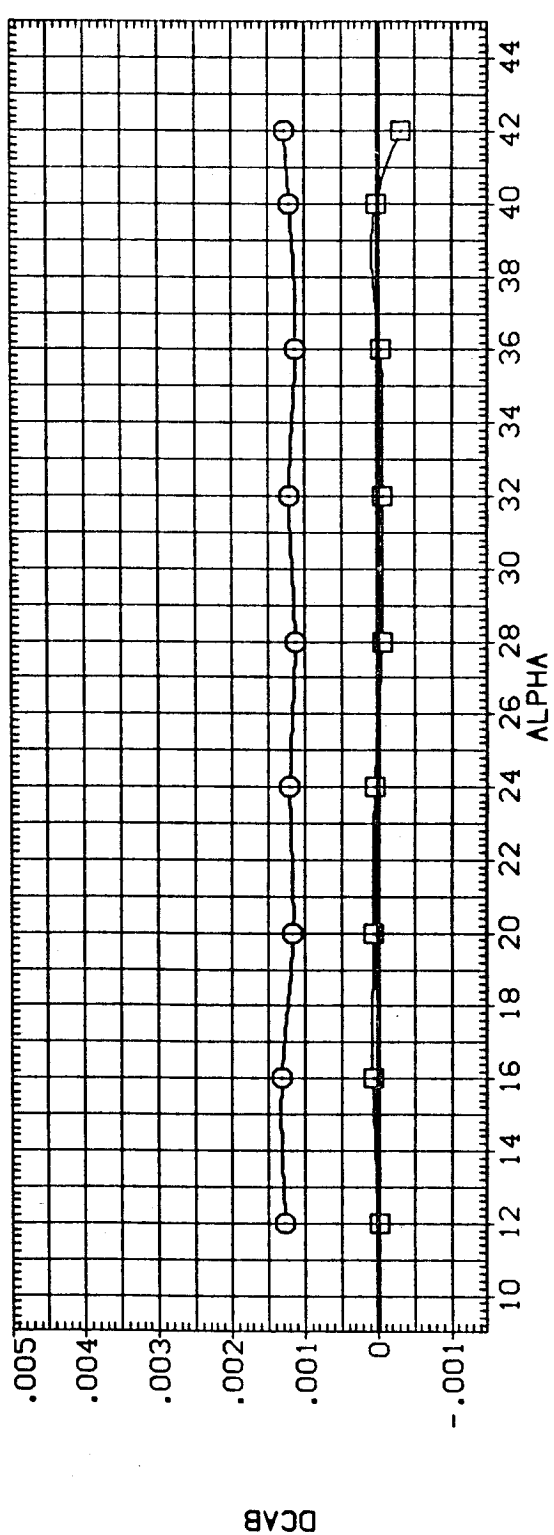
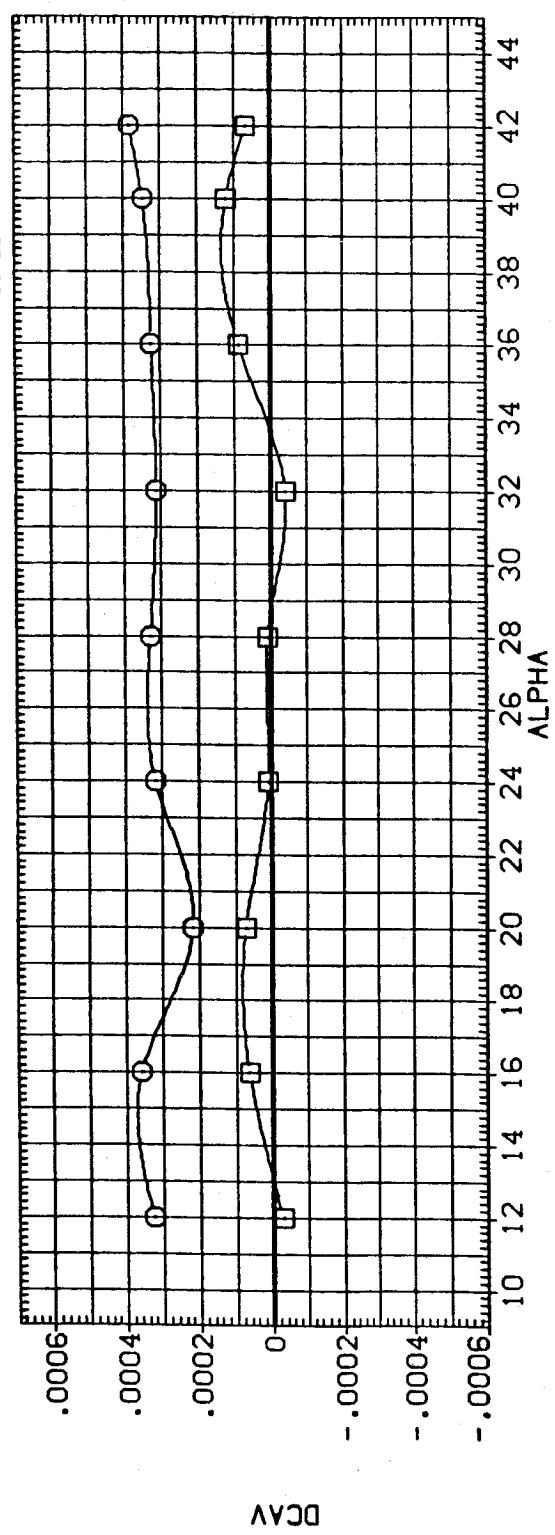


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.  
(B)MACH = 10.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(VEG0010)	AVES 3.5-190 0A98 (011-M7+H14-N24)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(VEG0018)	AVES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

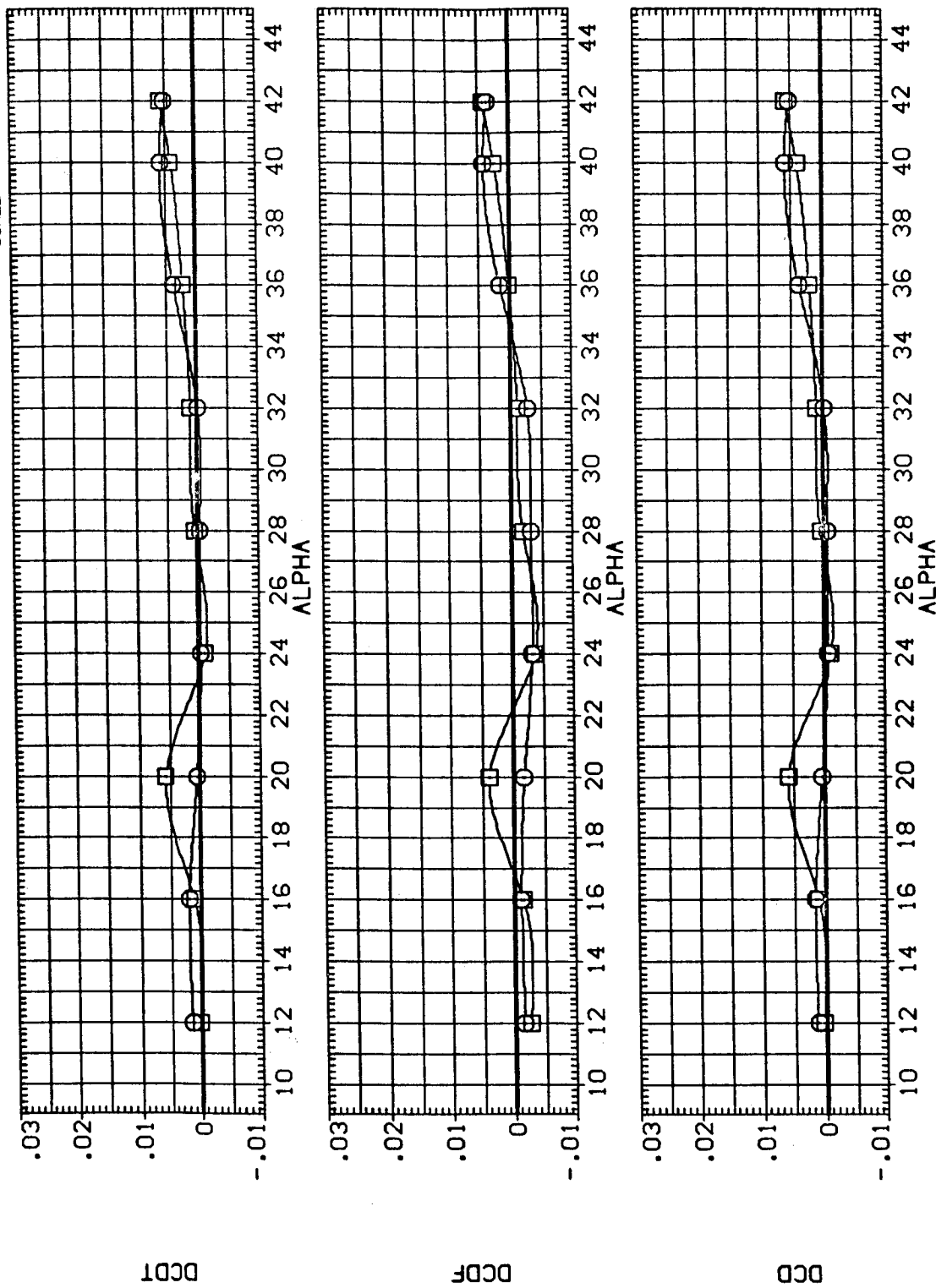


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(YEQ010)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(YEQ018)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF	474.8000 IN.
						BREF	936.6800 IN.
						YMRP	1076.7000 IN.X0
						YMRP	.0000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

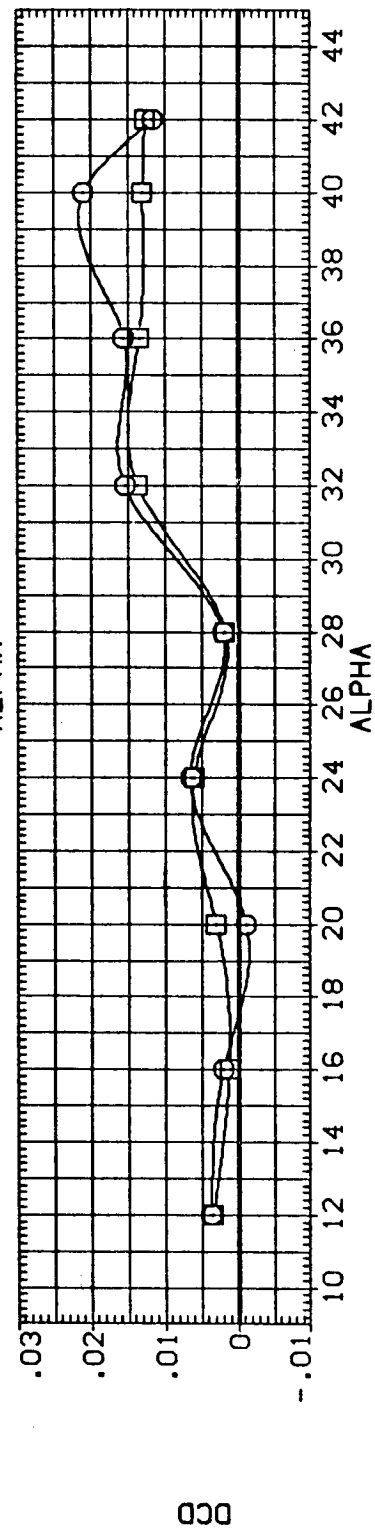
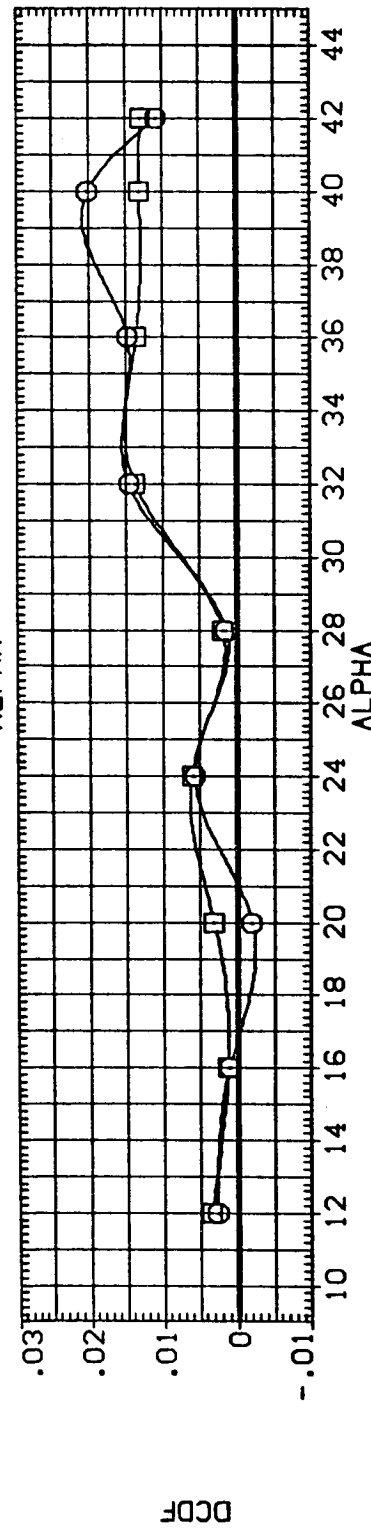
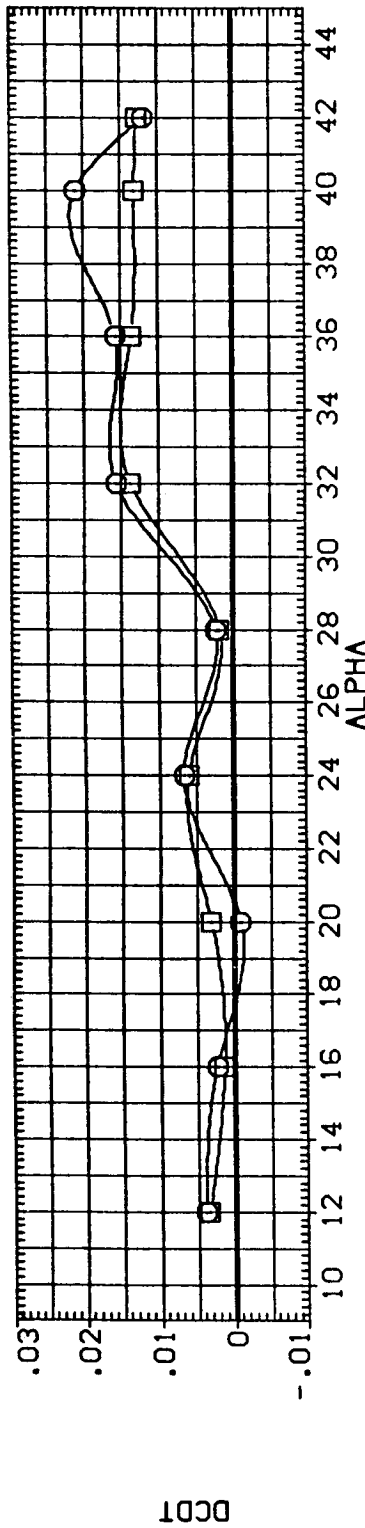


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (YEQ010) (YEQ018)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-M7-M14-N24)  
 AMES 3.5-190 0A98 (011-M7-M14-N24+JUNNY STING)

BETA .000  
 ELEVON -10.000  
 BOFLAP -11.700

SPDBRK 55.000  
 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.  
 YMRP .0000 IN.  
 ZMRP 375.0000 IN.  
 SCALE .0150

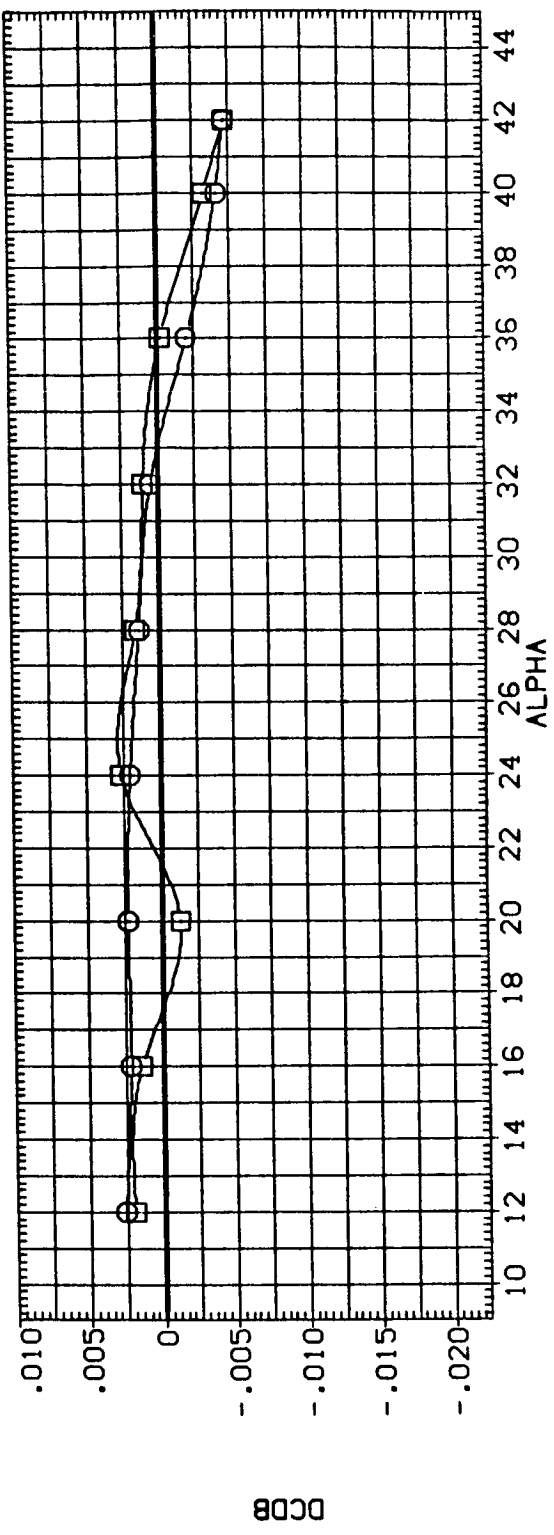
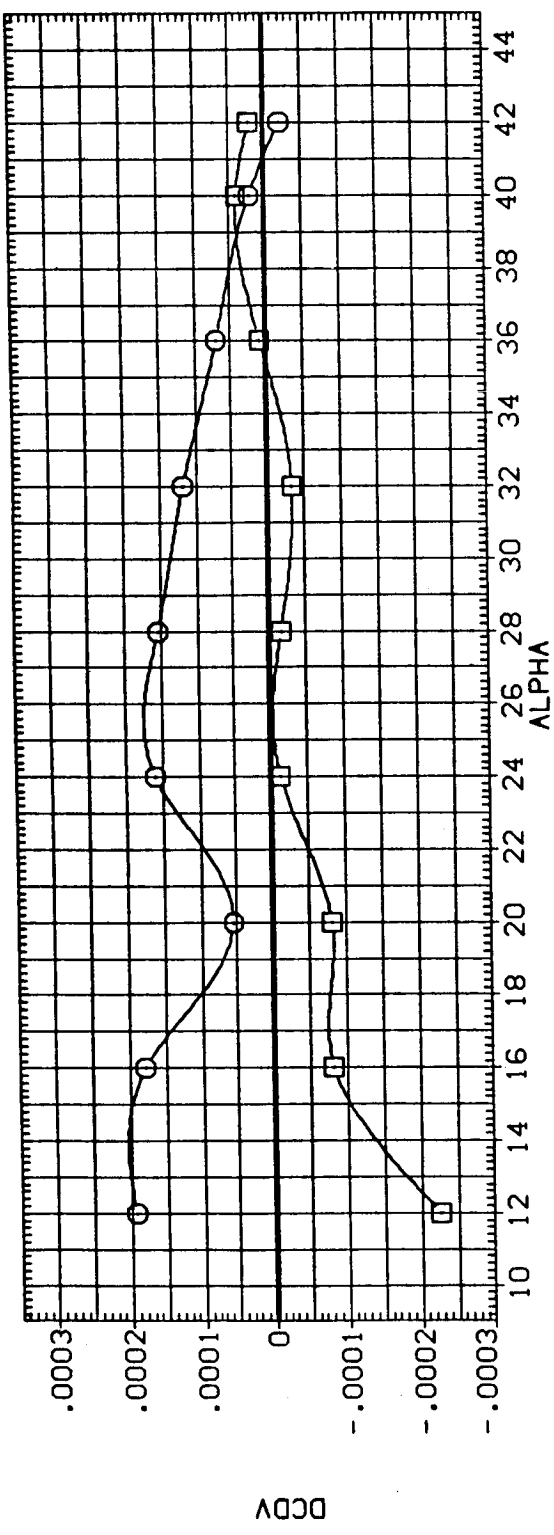


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A) MACH = 5.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(YEQ010)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(YEQ018)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

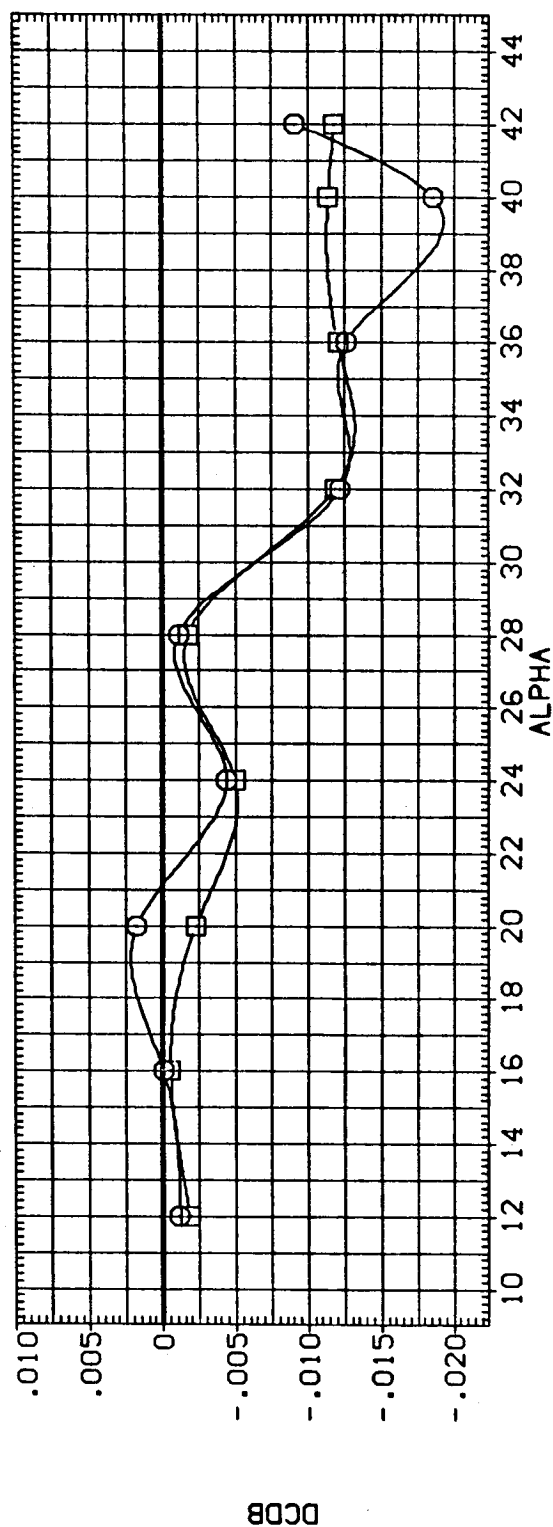
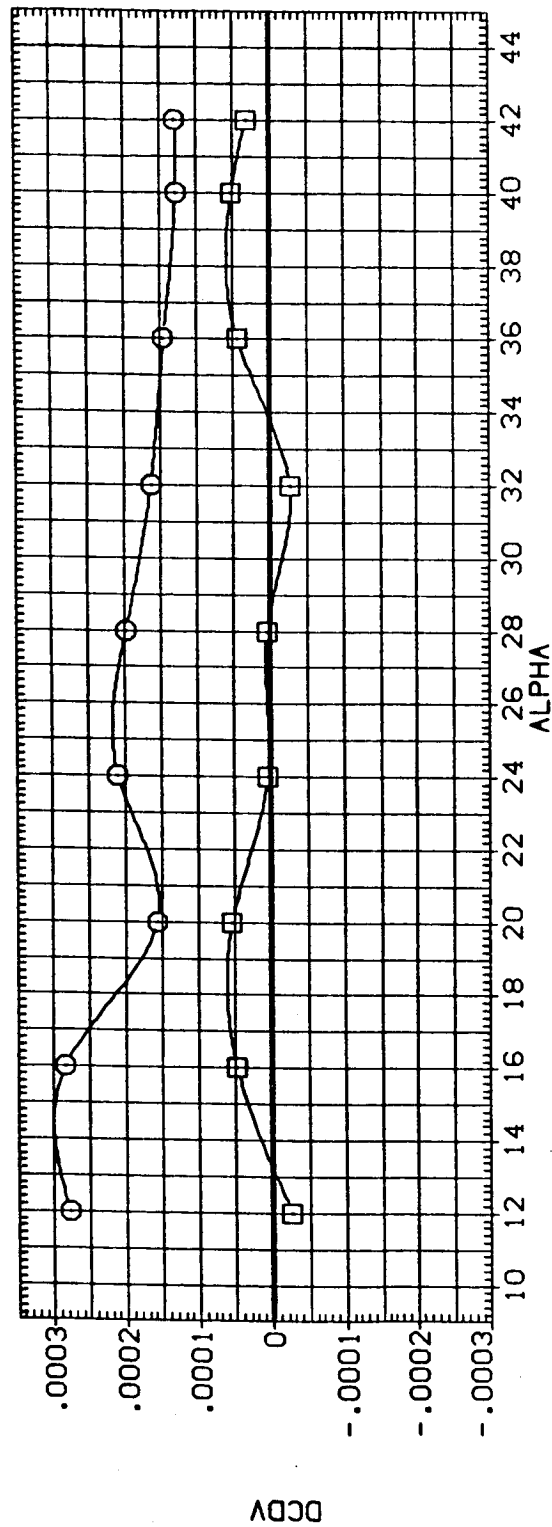


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(AED002)	AMES 3.5-190 OAS8 (011-M7-M14)	.000	-10.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(AED010)	AMES 3.5-190 OAS8 (011-M7-M14-N24)	.000	-10.000	-11.700	55.000	LREF	474.8000 IN.
(AED018)	AMES 3.5-190 OAS8 (011-M7-M14-N24-DUMMY STING)	.000	-10.000	-11.700	55.000	BREF	936.6800 IN.
						XMRP	1076.7000 IN.Y0
						YMRP	.0000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

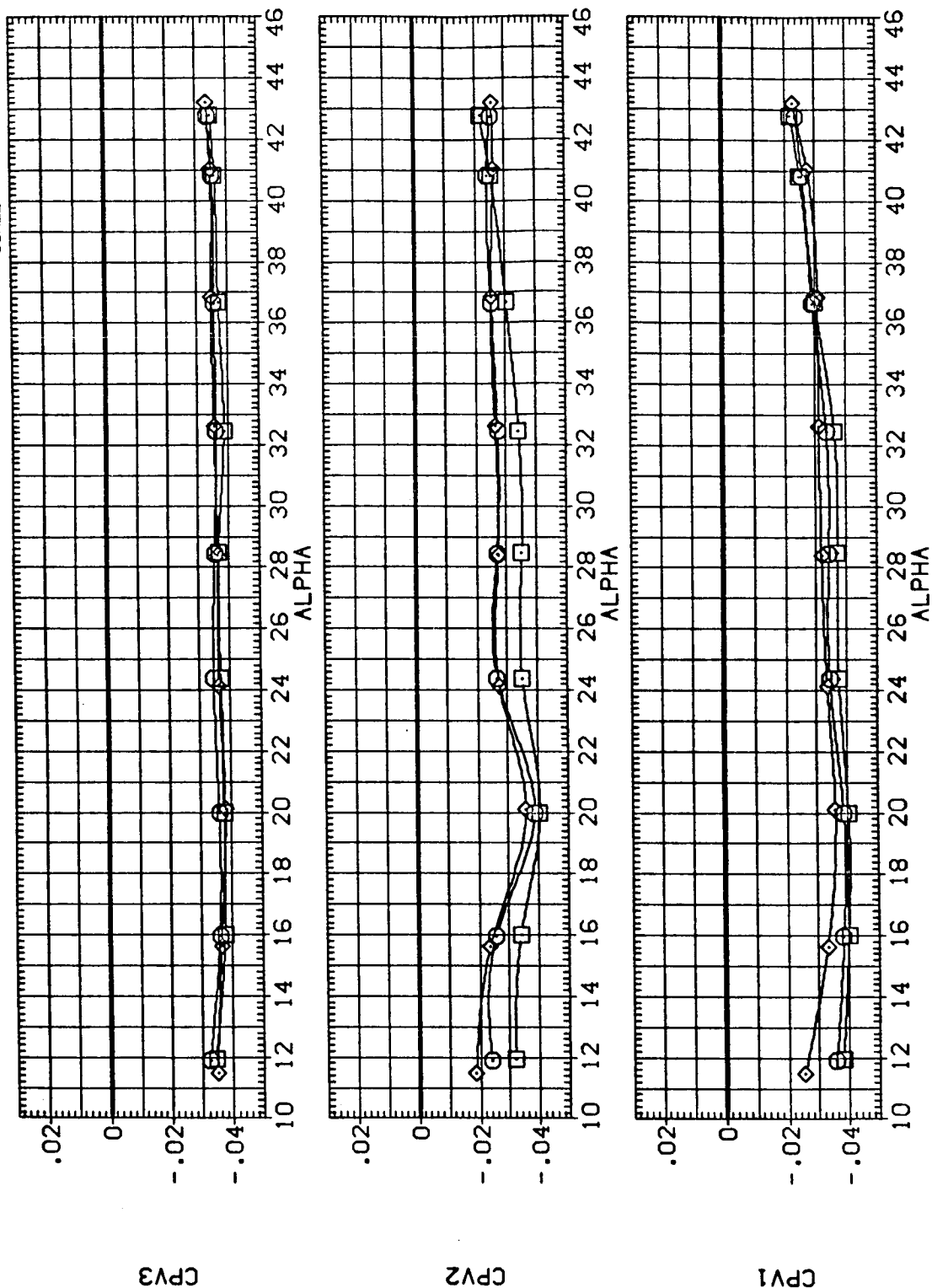


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(AEO002)	AMES 3.5-190 DA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AEO010)	AMES 3.5-190 DA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(AEO018)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

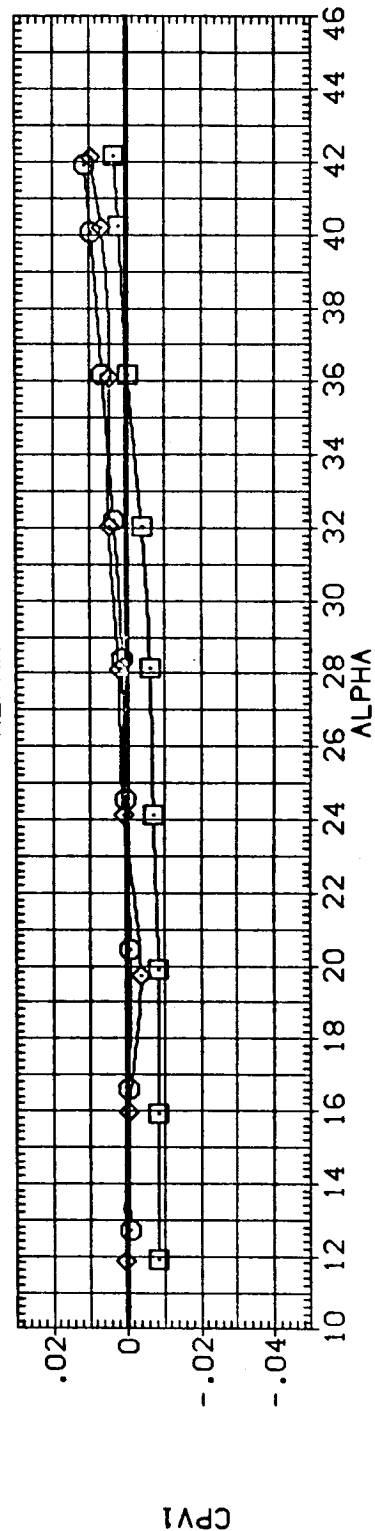
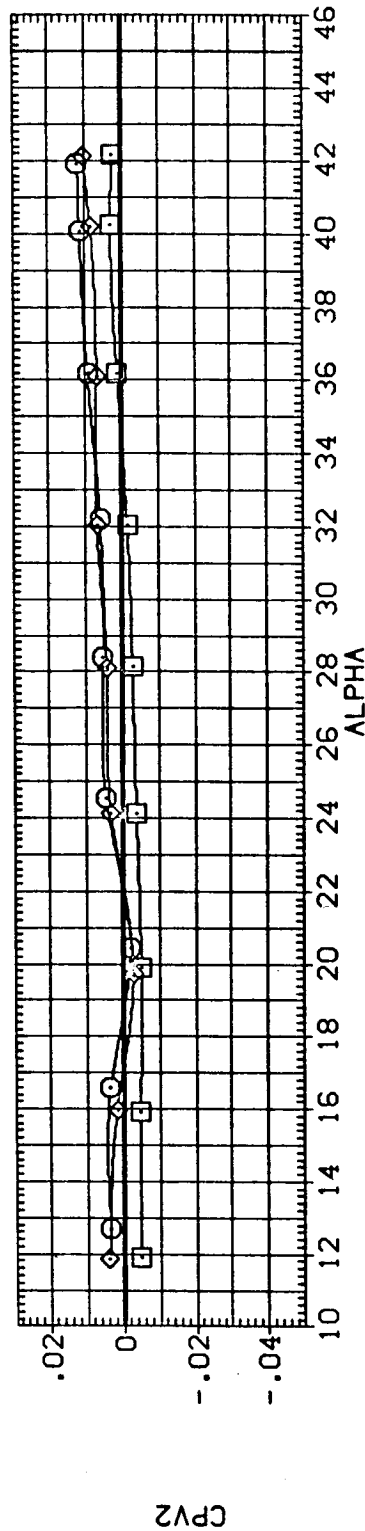
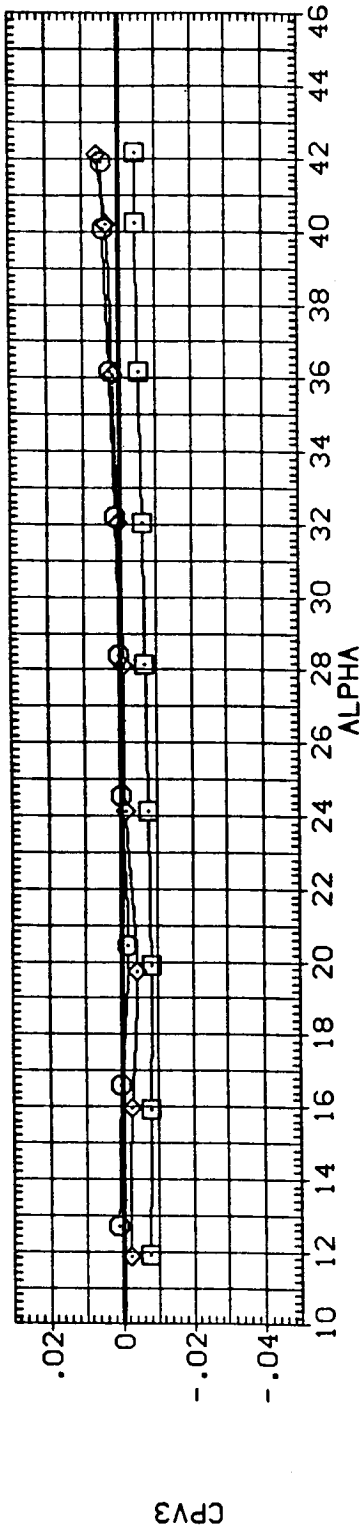


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B) MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AEQ002)	AVES 3.5-190 GA98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AEQ010)	AVES 3.5-190 GA98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF 474.8000 IN.
(AEQ018)	AVES 3.5-190 GA98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

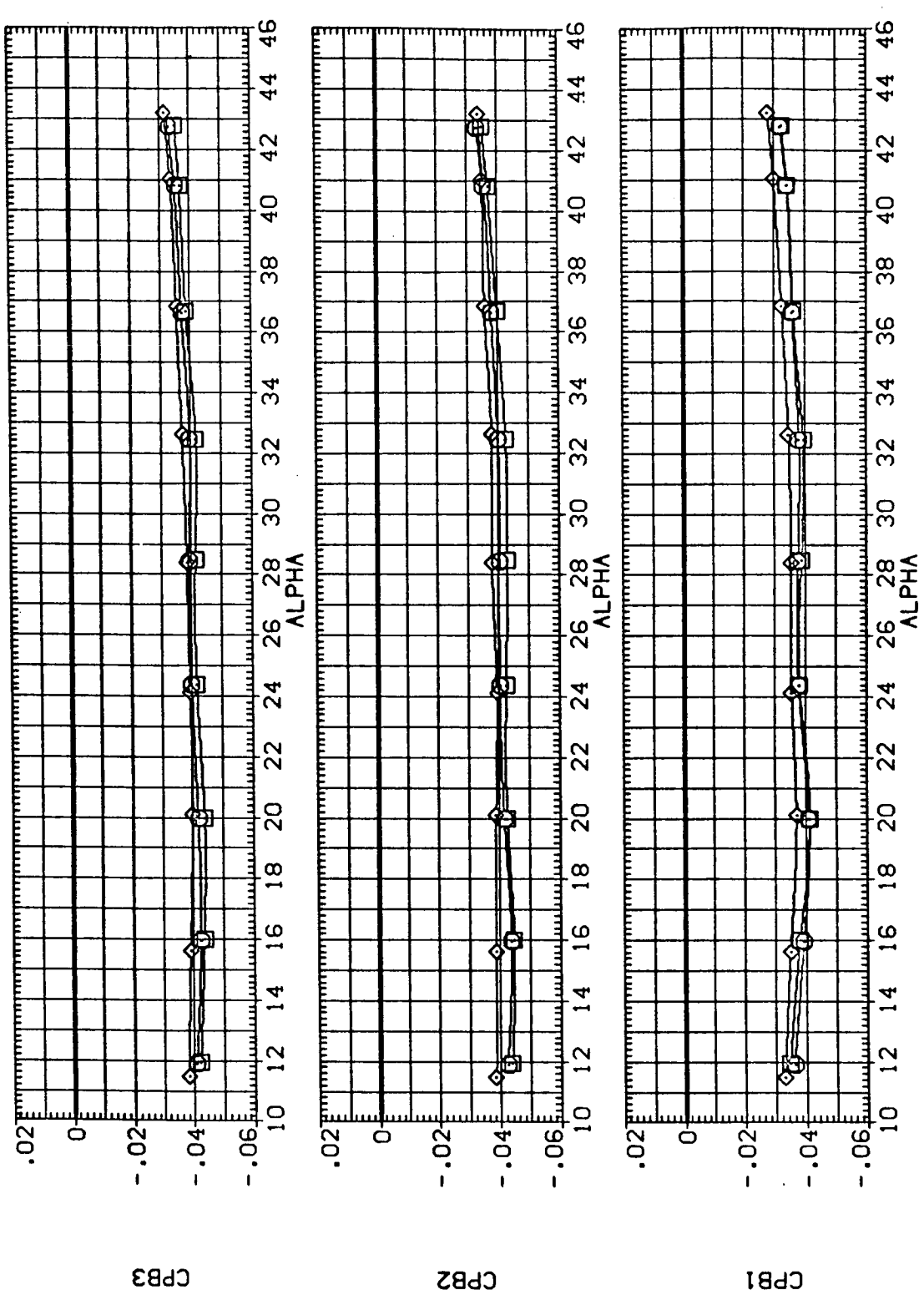


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION		
(AEO002)	AVES 3.5-190 0A98 (011-M7+M14)	.000	-10.000	-11.700	55.000	SREF	2690.0000	50.FT.
(AEO010)	AVES 3.5-190 0A98 (011-M7+M14-N24)	.000	-10.000	-11.700	55.000	LREF	474.8000	IN.
(AEO018)	AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-10.000	-11.700	55.000	BREF	936.6800	IN.
						XMRP	1076.7000	IN. X0
						YMRP	.0000	IN. Y0
						ZMRP	375.0000	IN. Z0
						SCALE	.0150	

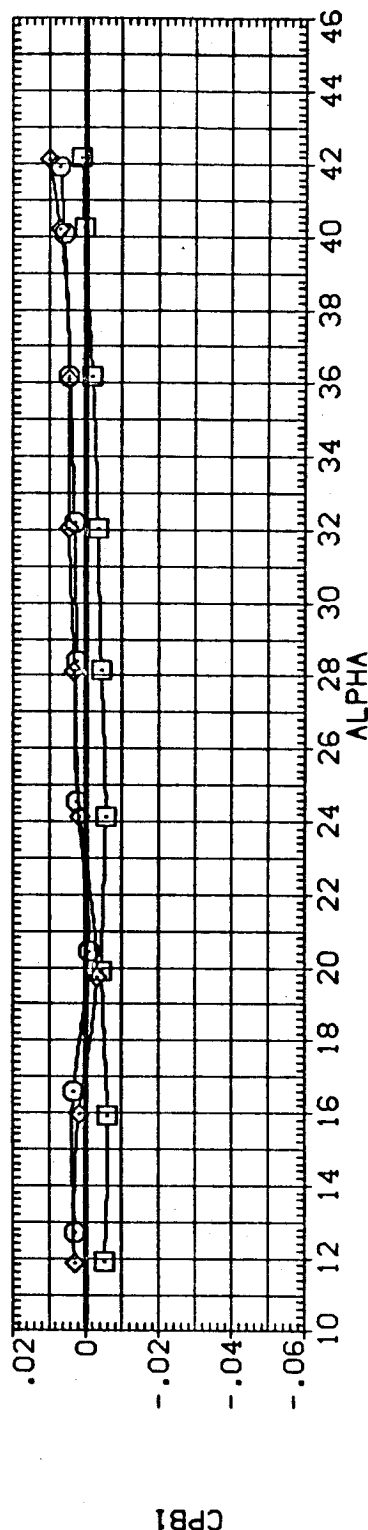
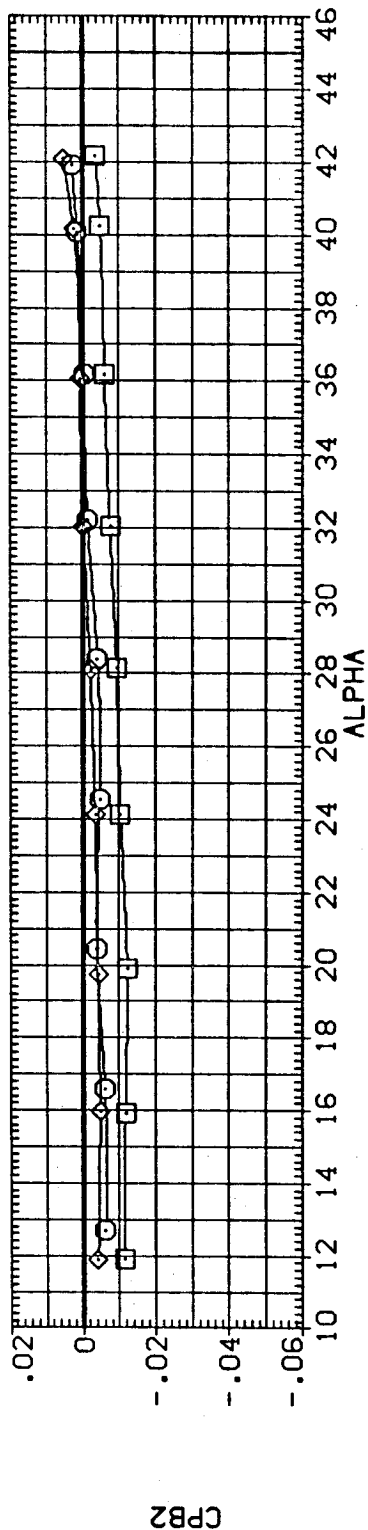
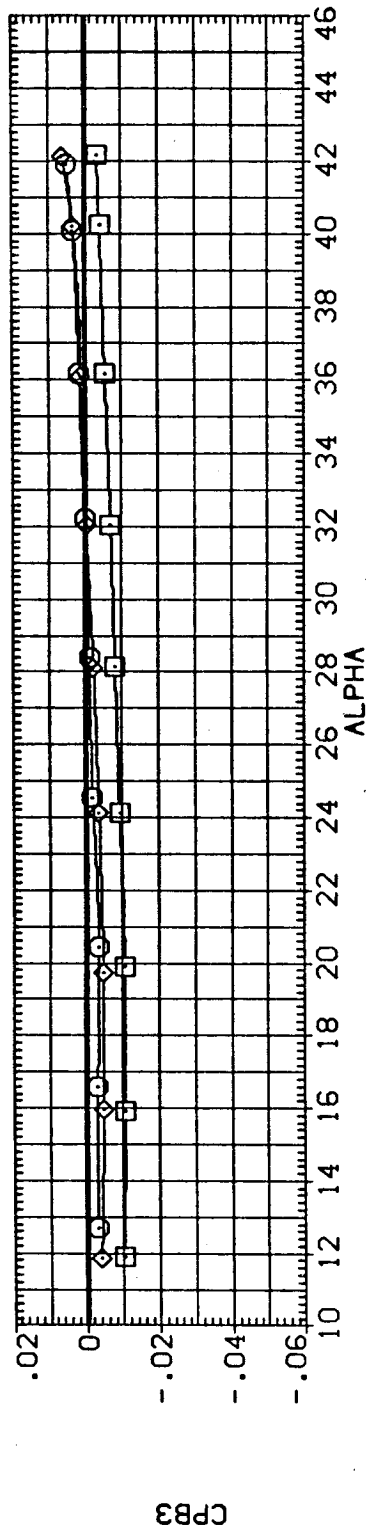


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

Q-6

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

$$C(A)MACH = 5.25$$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X
						YMRP .0000 IN.Y
						ZMRP 375.0000 IN.Z
						SCALE .0150

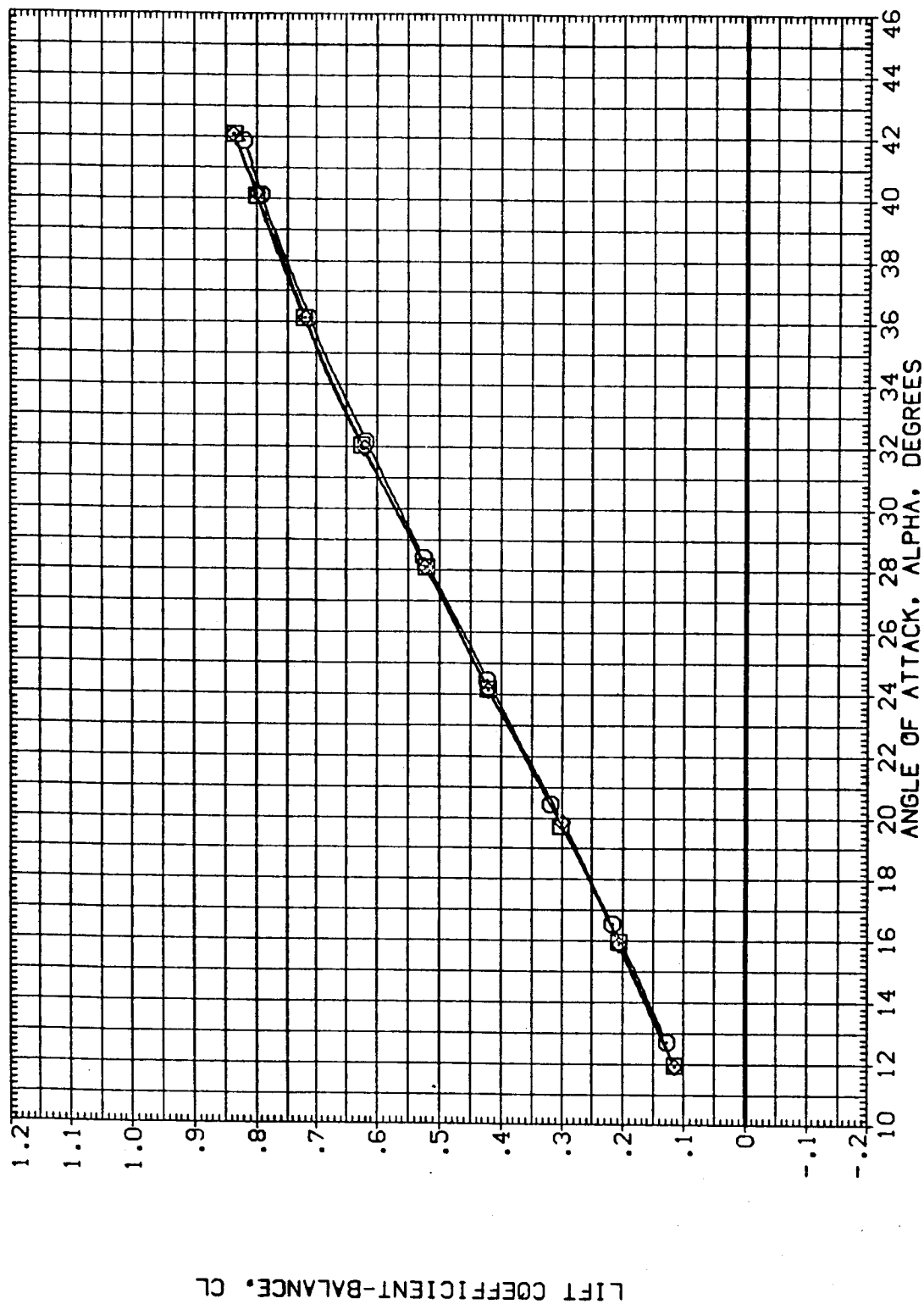


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL    CONFIGURATION DESCRIPTION

(CE0003)    AMES 3.5-190 0A98 (011-47+M14)

(CE0011)    AMES 3.5-190 0A98 (011-47+M14-N24)

(CE0019)    AMES 3.5-190 0A98 (011-47+M14-N24+DUMMY STING)

BETA    ELEVON    BOFLAP    SPDRBK

.000    -40.000    -11.700    55.000

.000    -40.000    -11.700    55.000

.000    -40.000    -11.700    55.000

REFERENCE INFORMATION

SREF    2690.0000    SQ.FT.

LREF    474.8000    IN.

BREF    936.6800    IN.

XMRP    1076.7000    IN.X0

YMRP    .0000    IN.Y0

ZMRP    375.0000    IN.Z0

SCALE    .0150

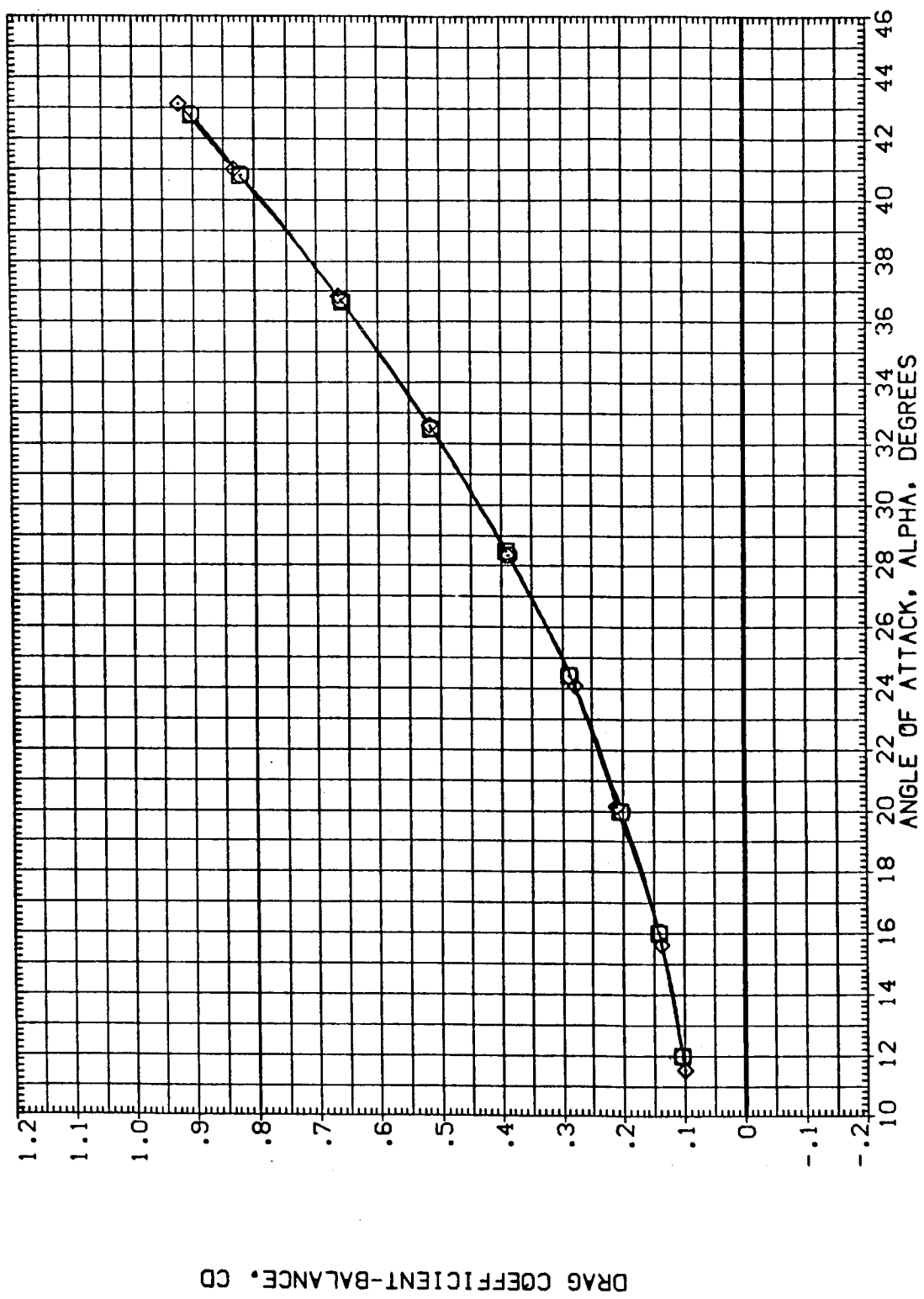


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 OA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

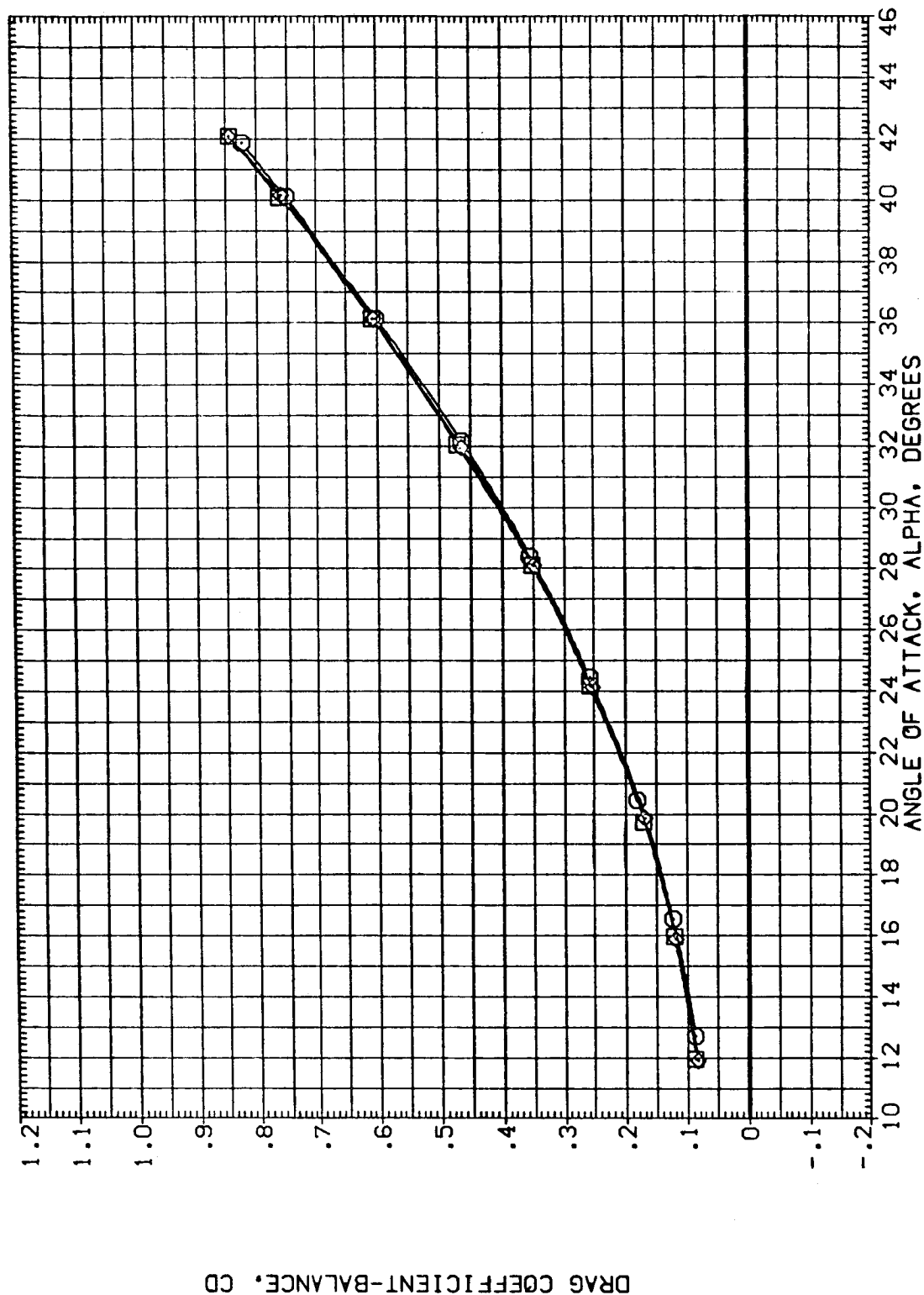


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 GA98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

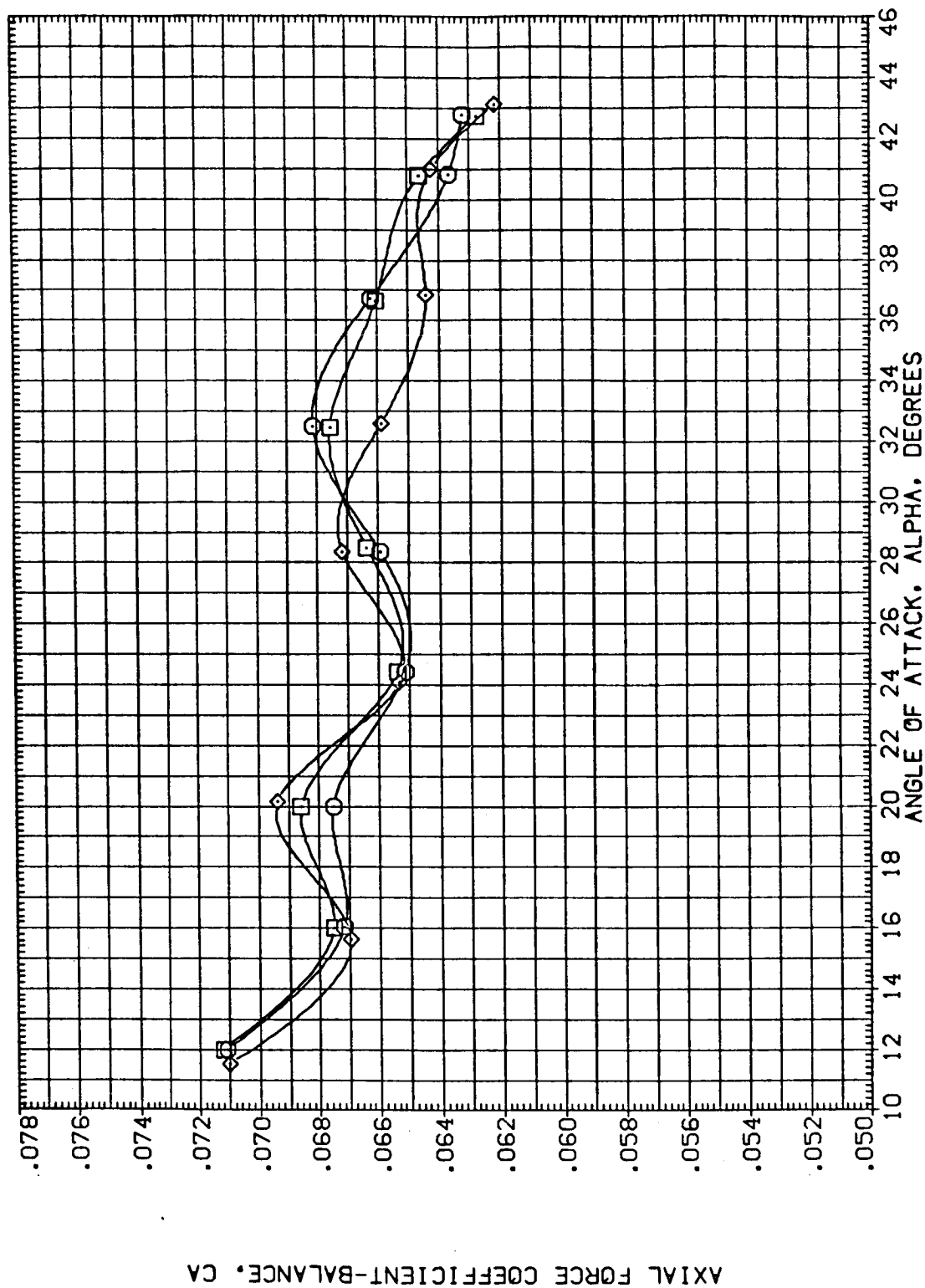


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 0A98 (011-17+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0011)	AMES 3.5-190 0A98 (011-17+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

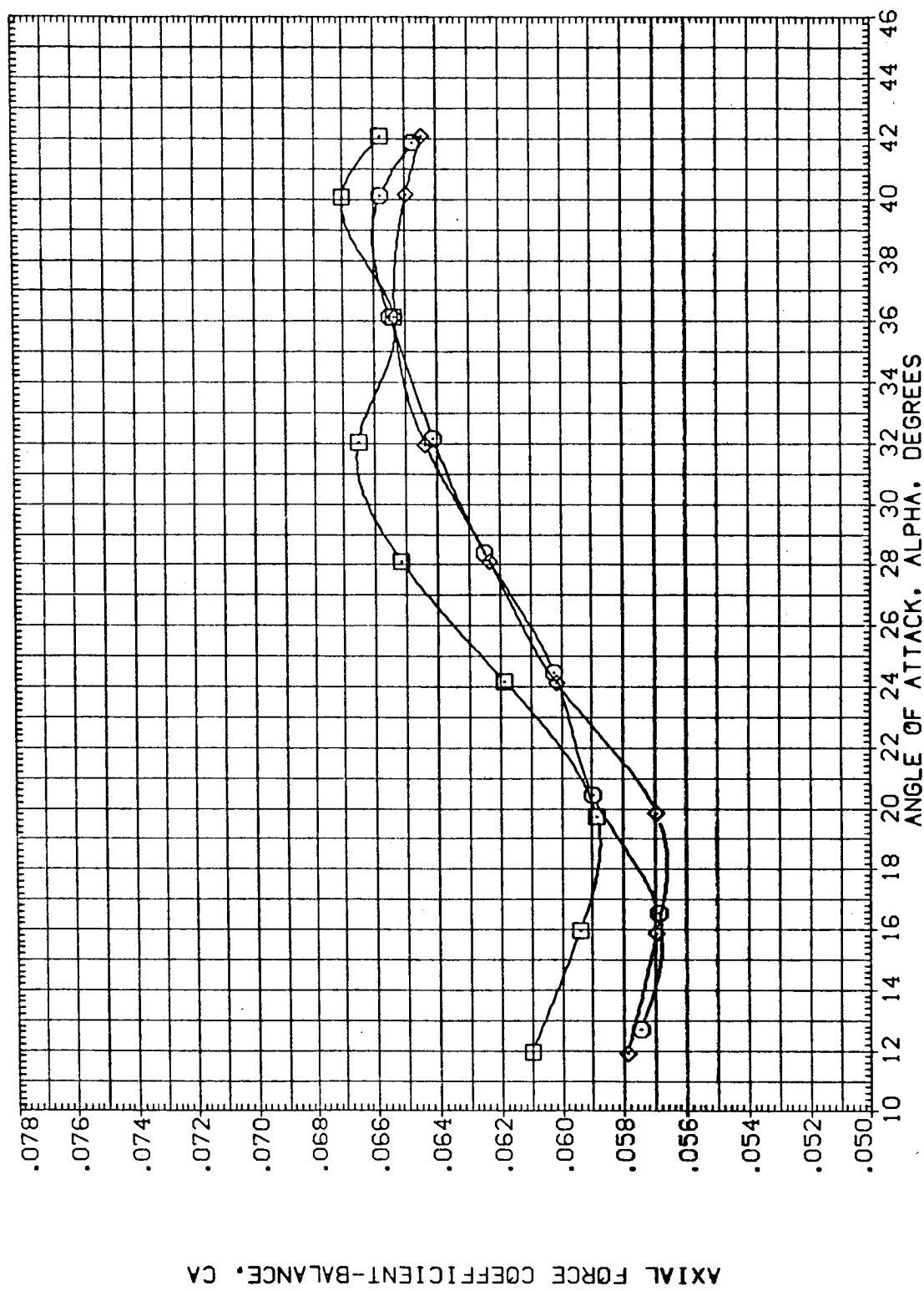


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFD

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

$$(A)_{MACH} = 5.25$$

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    BETA    ELEVON    BOFLAP    SPDBRK    REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

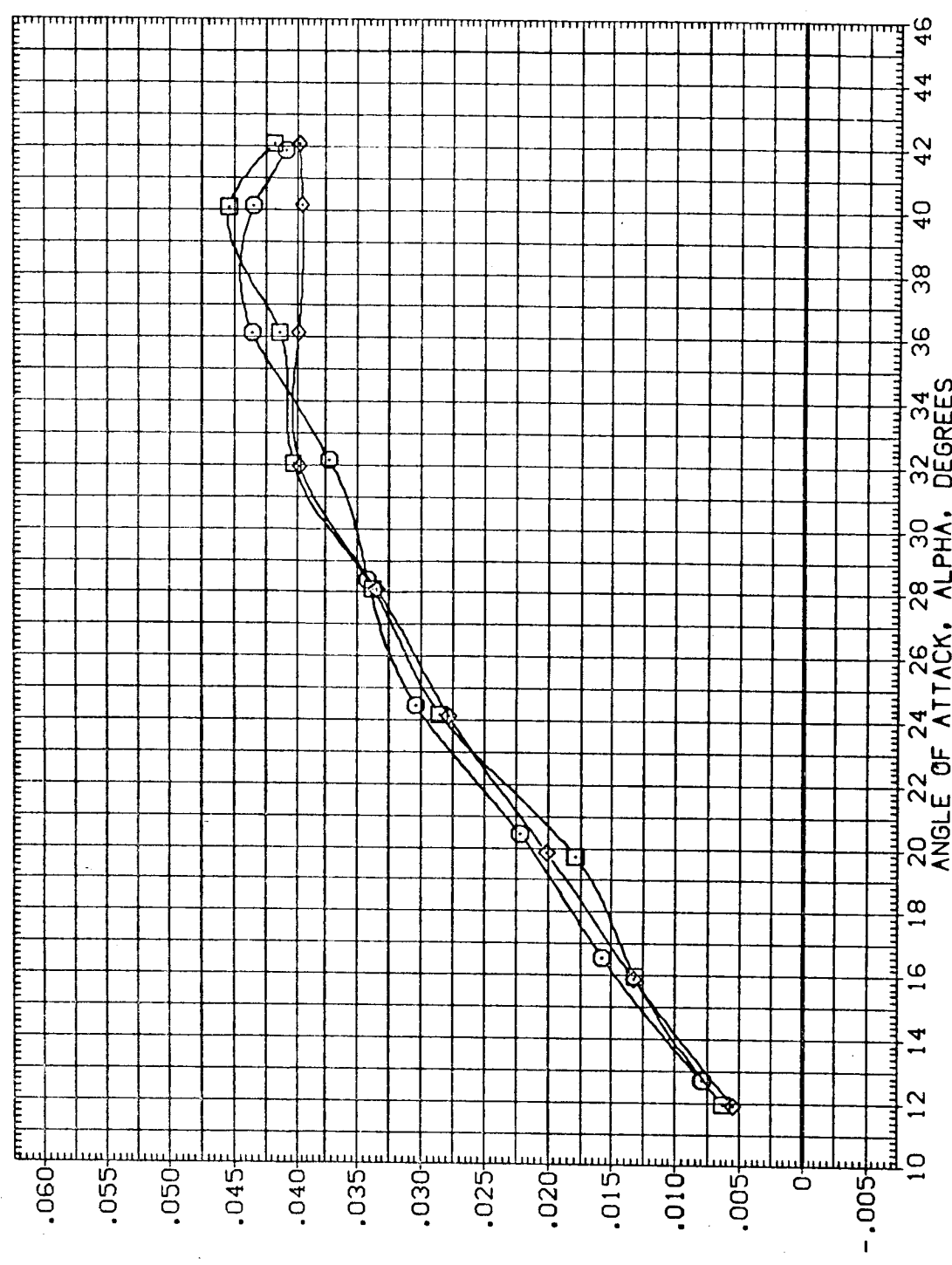


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
.000	-40.000	-11.700	55.000	XMRP 1076.7000 IN.X0
				YMRP .0000 IN.Y0
				ZMRP 375.0000 IN.Z0
				SCALE .0150

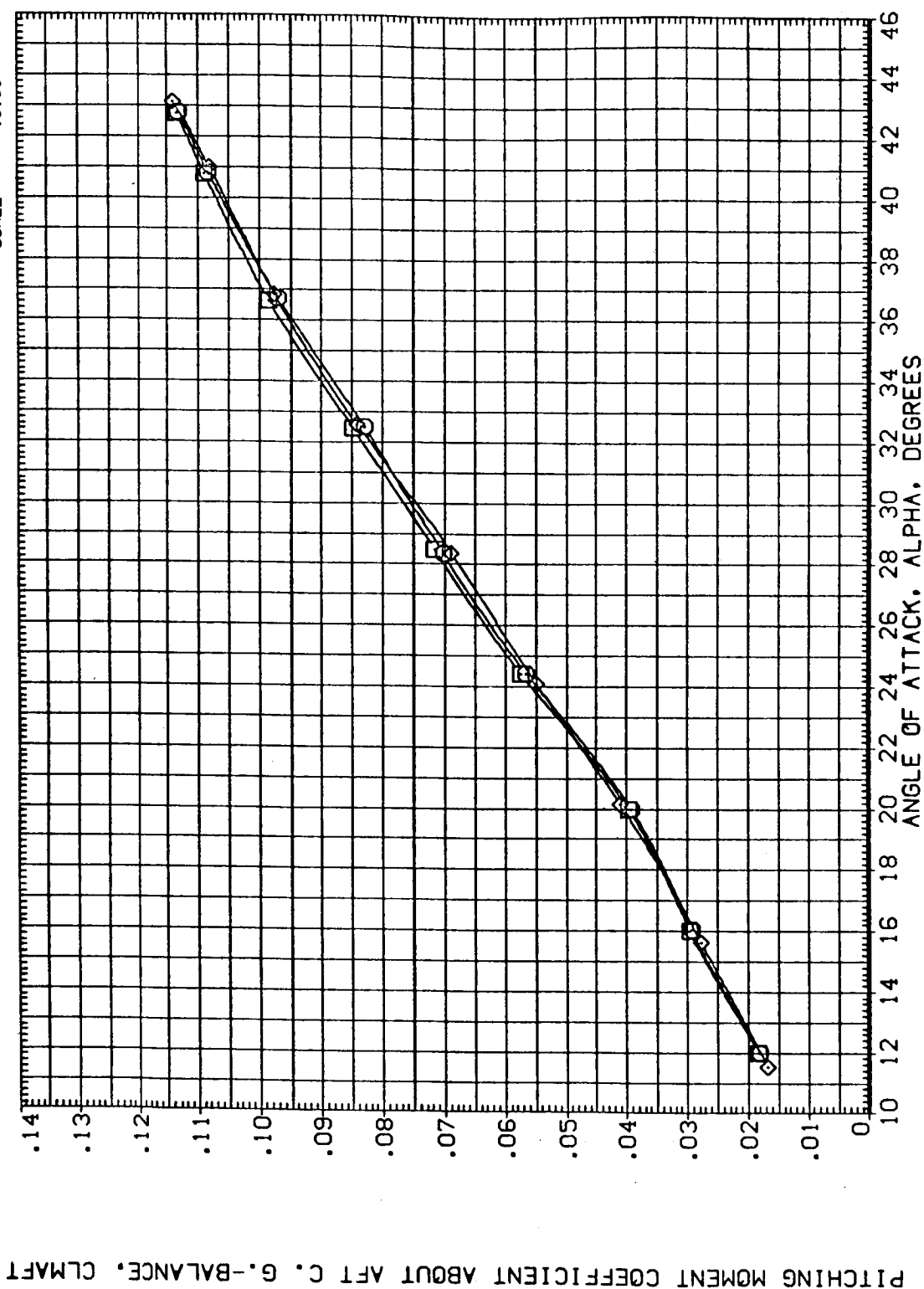


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

$$CA)MACH = 5.25$$



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(CEQ003)	AMES 3.5-190 CA98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CEQ011)	AMES 3.5-190 CA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CEQ019)	AMES 3.5-190 CA98 (011-M7-M14-N24-DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMFT

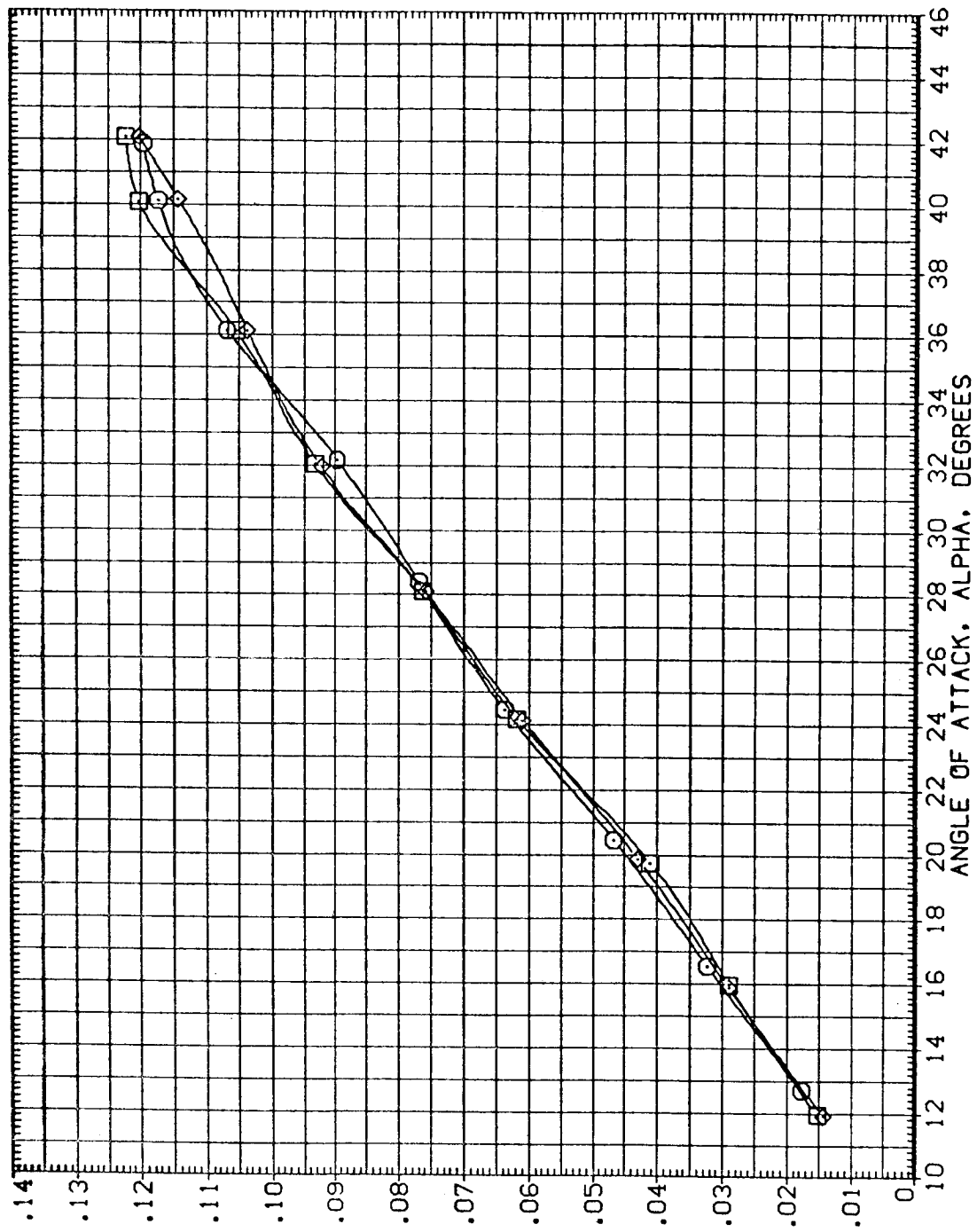


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 GA98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 GA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

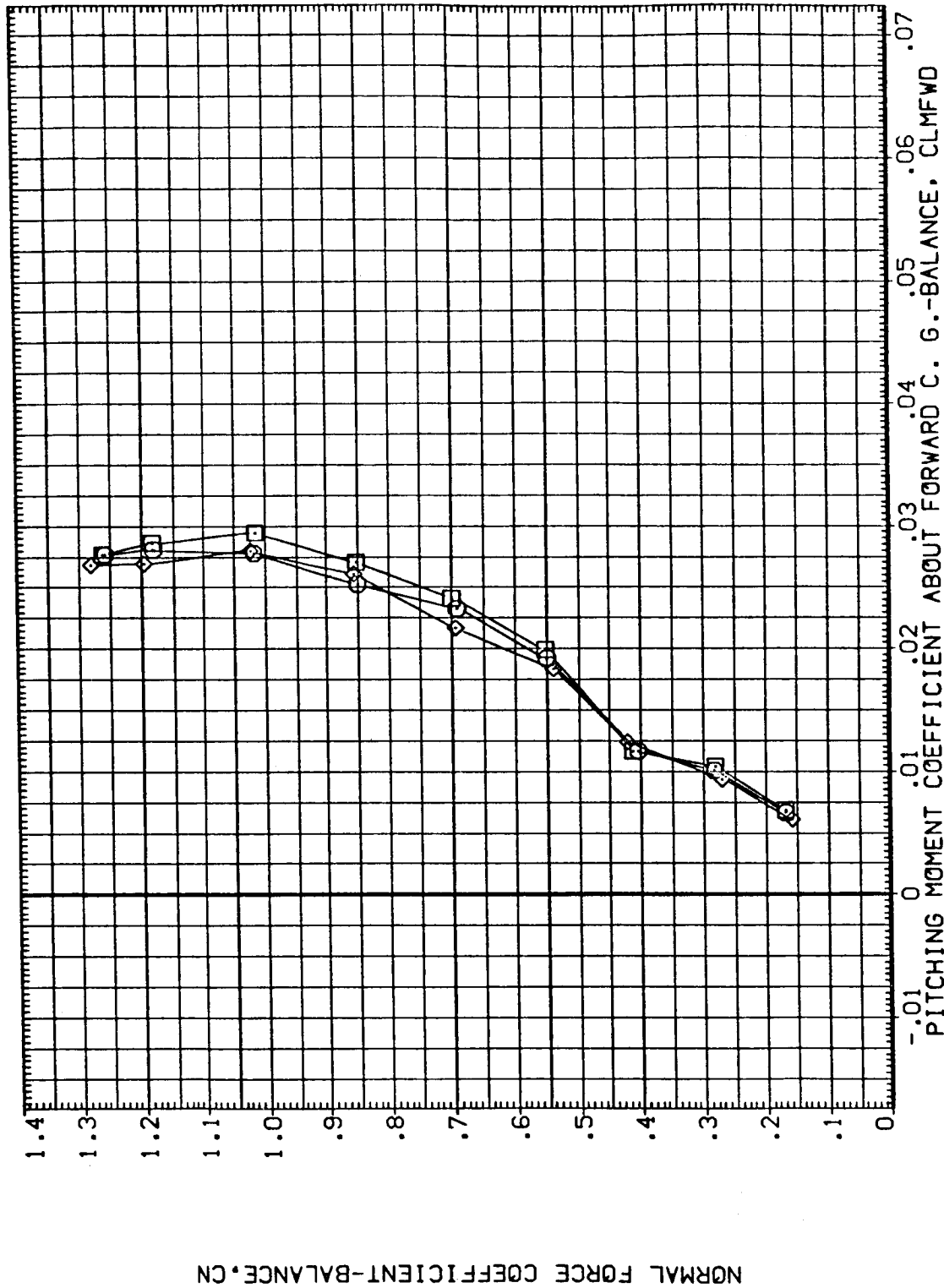


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

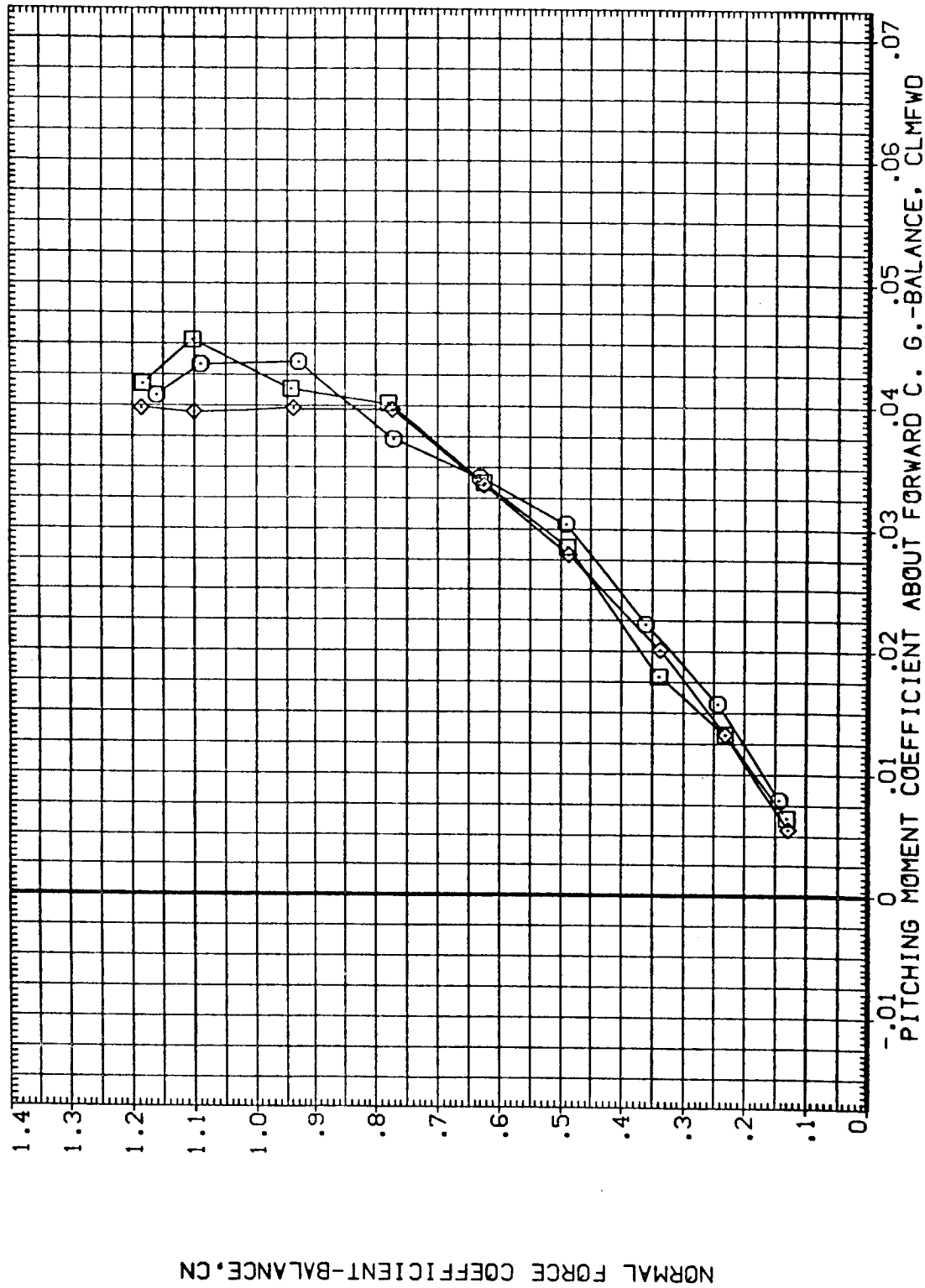


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN. X0
						XMRP 1076.7000 IN. Y0
						YMRP .0000 IN. Z0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

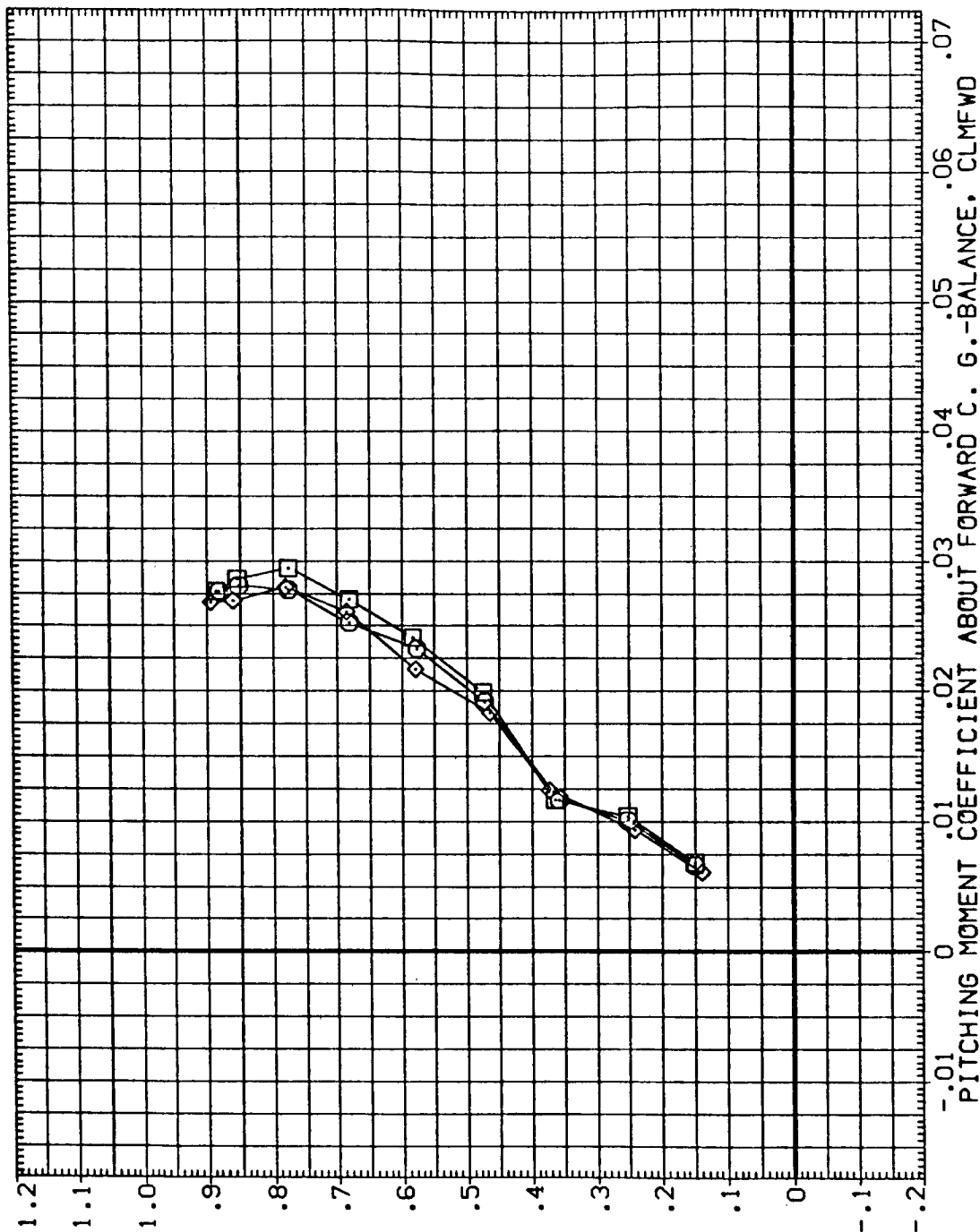


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

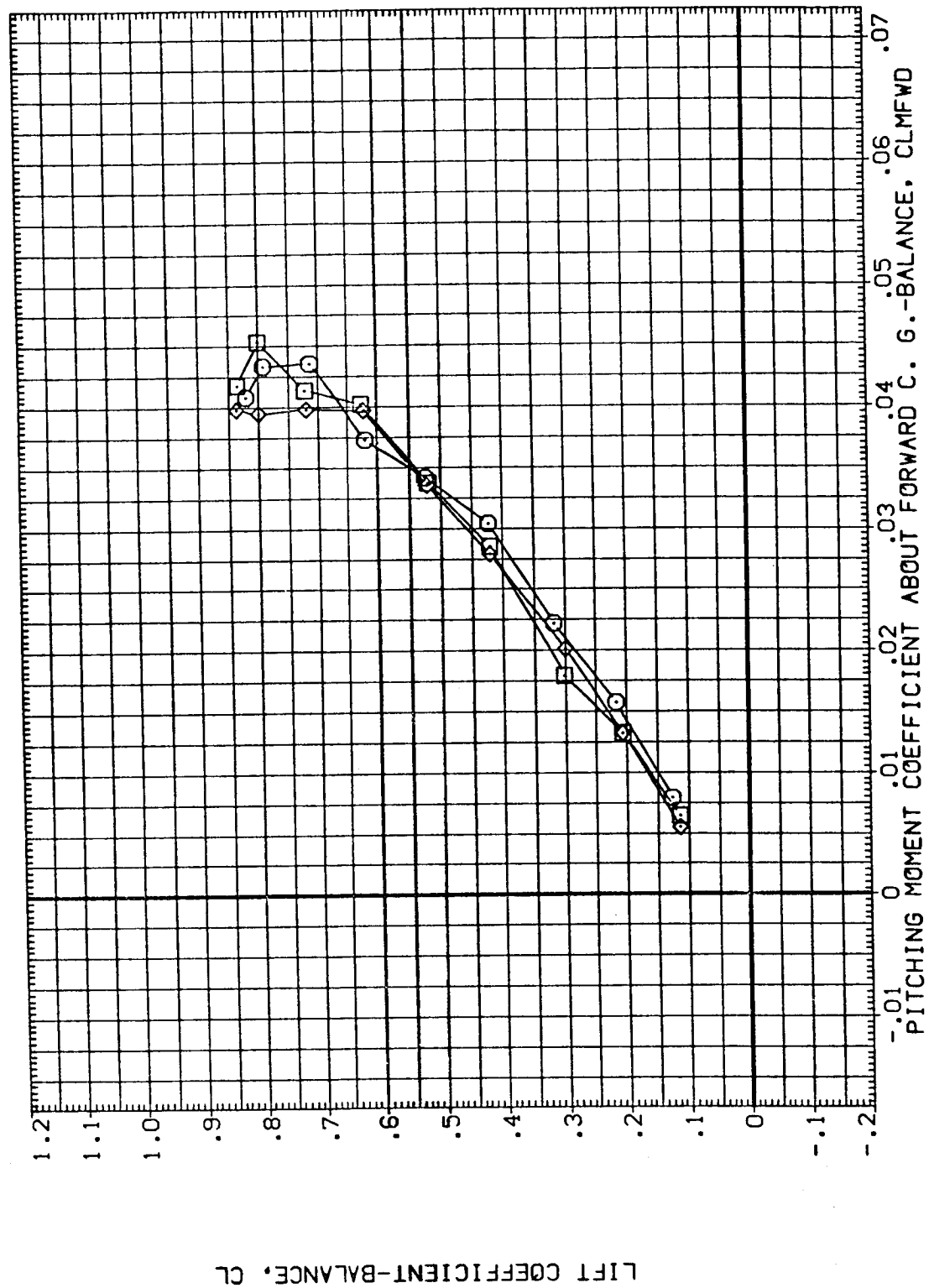


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEV/IN	BOFLAP	SPOBRK	REFERENCE INFORMATION	SQ.FT.
(CE0003)	AVES 3.5-190 GA98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF	2690.0000
(CE0011)	AVES 3.5-190 GA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF	474.8000
(CE0019)	AVES 3.5-190 GA98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF	936.6800
						XMRP	1076.7000
						YMRP	.0000
						ZMRP	375.0000
						SCALE	.0150

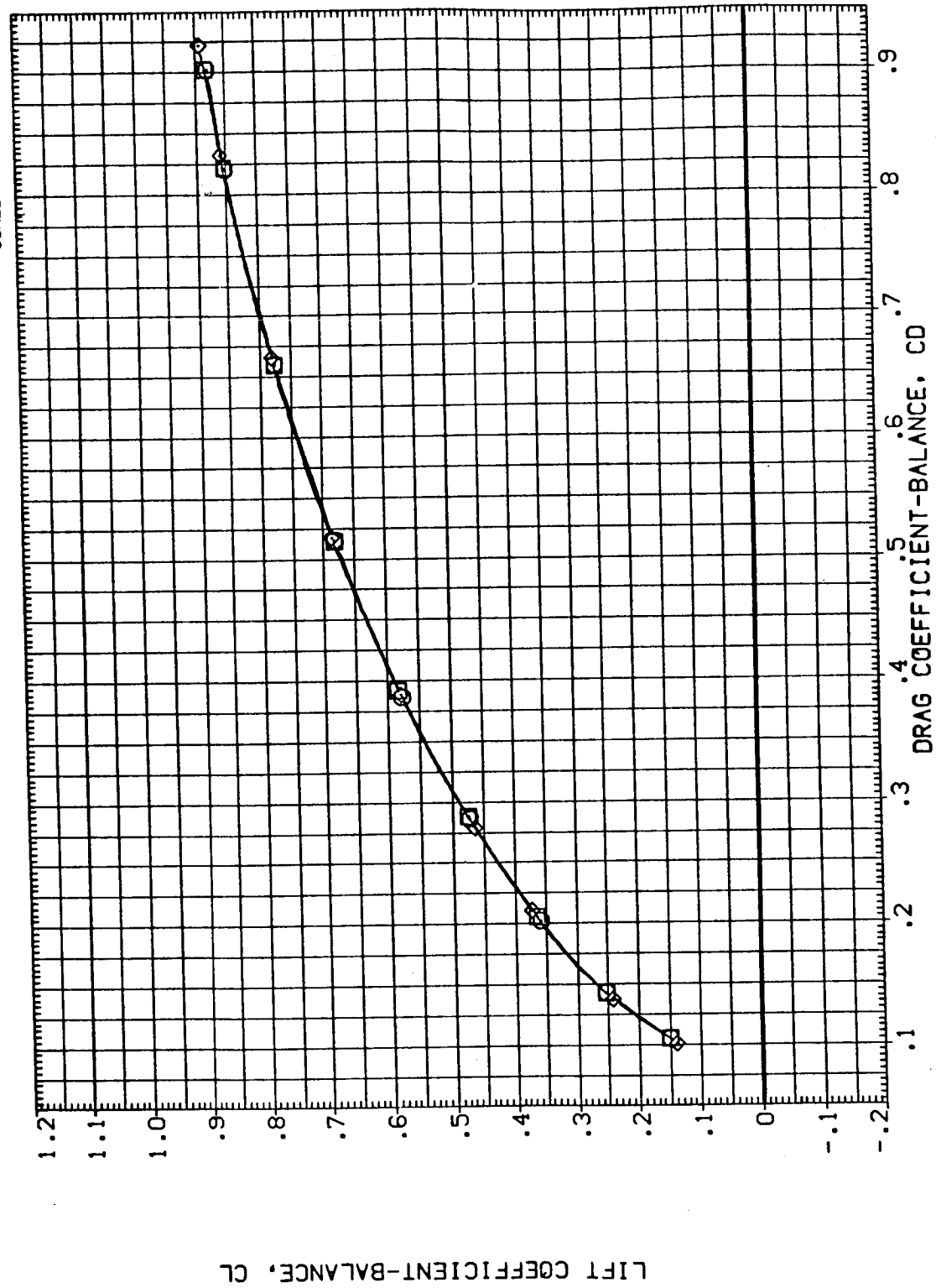


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0003)	AMES 3.5-190 OA98 (011-H7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0011)	AMES 3.5-190 OA98 (011-H7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0019)	AMES 3.5-190 OA98 (011-H7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

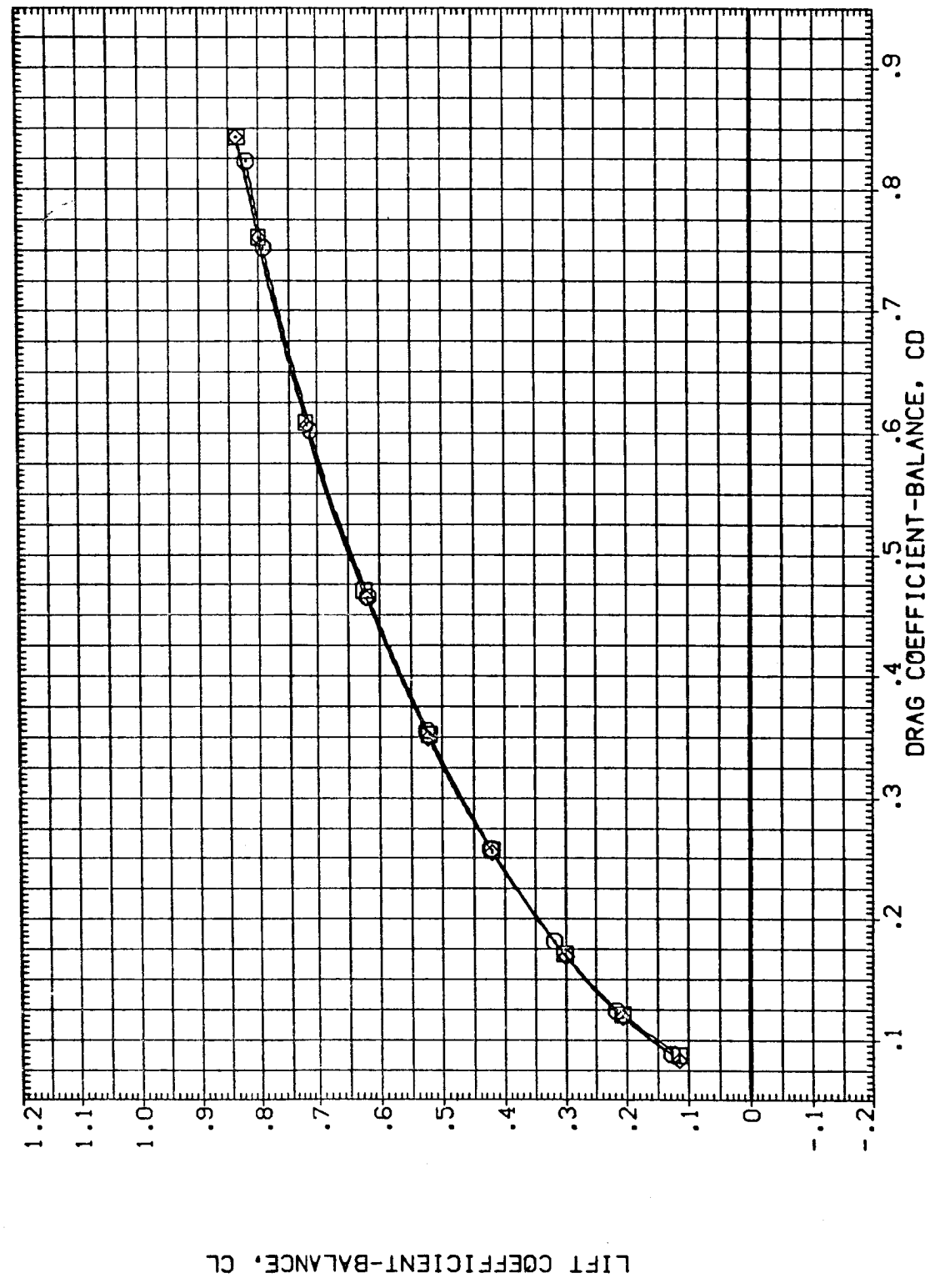


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0003)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0011)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

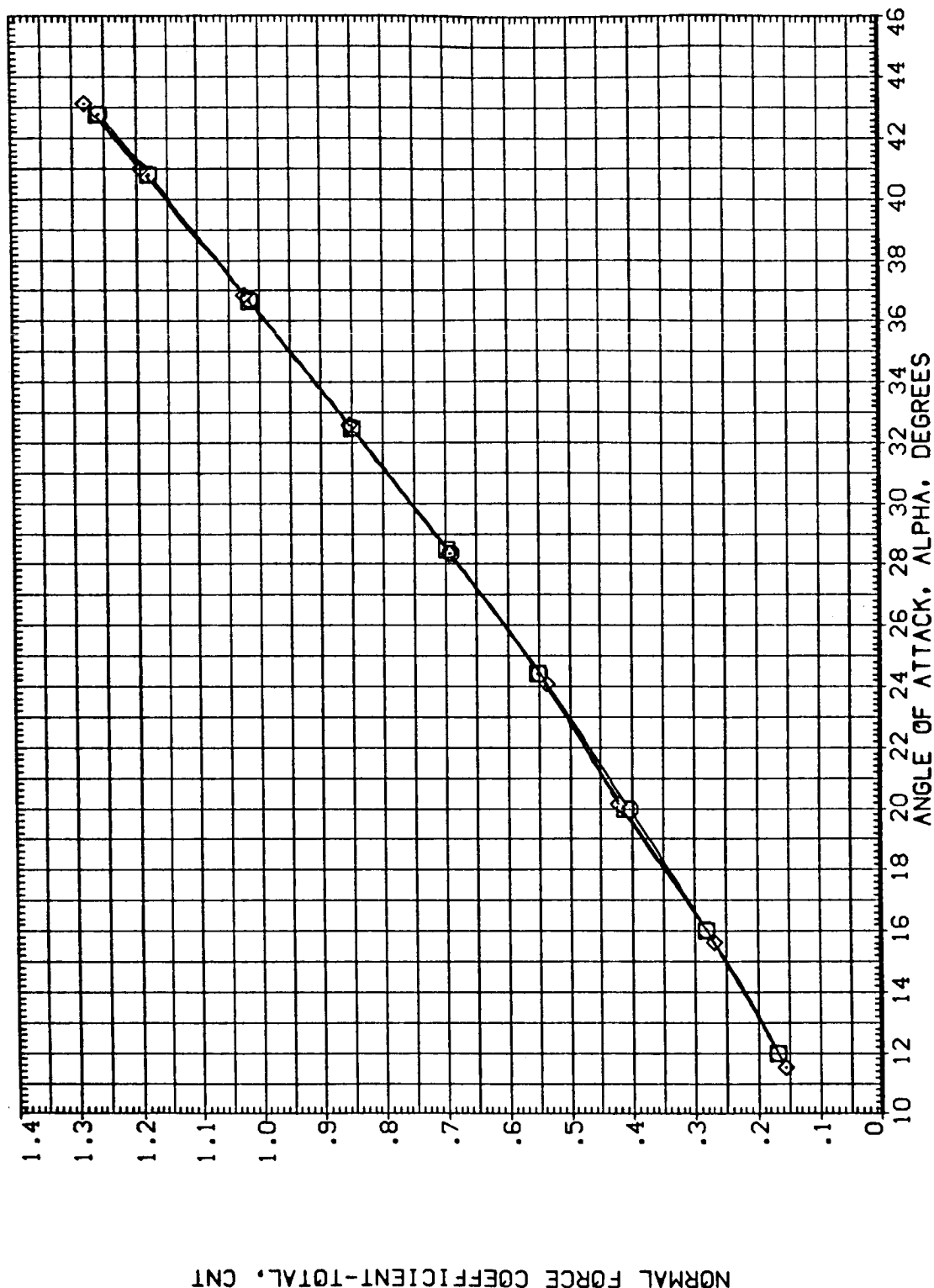


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SO.FT.
(EE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.XD
						ZMRP .0000 IN.YD
						SCALE 375.0000 IN.ZD
						.0150

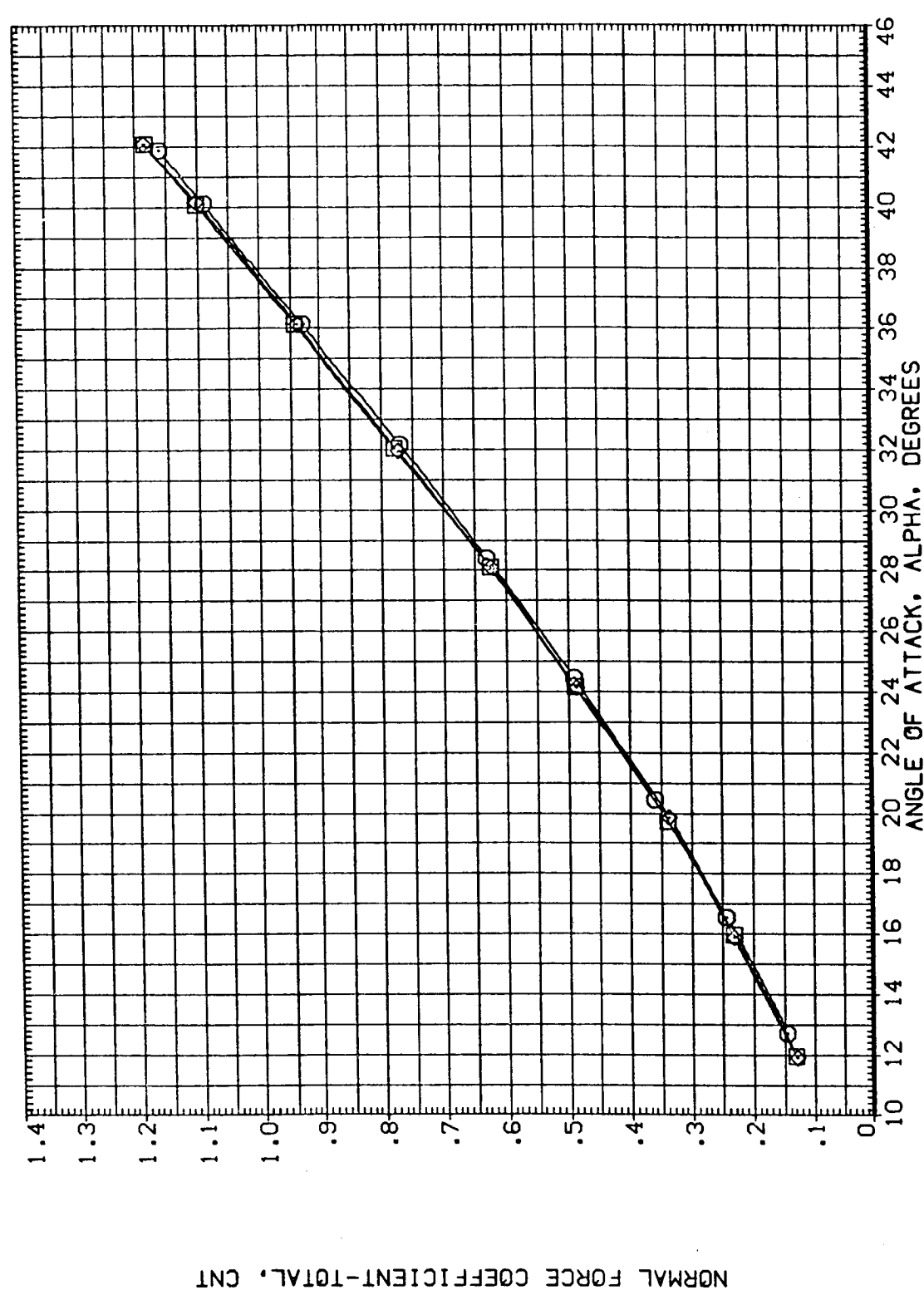


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

DATA SET SYMBOL  
(EE0003)  
(EE0011)  
(EE0019)

CONFIGURATION DESCRIPTION  
AVES 3.5-190 0A98 (011-17+114)  
AVES 3.5-190 0A98 (011-17+114-N24)  
AVES 3.5-190 0A98 (011-17+114-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
-40.000  
-40.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

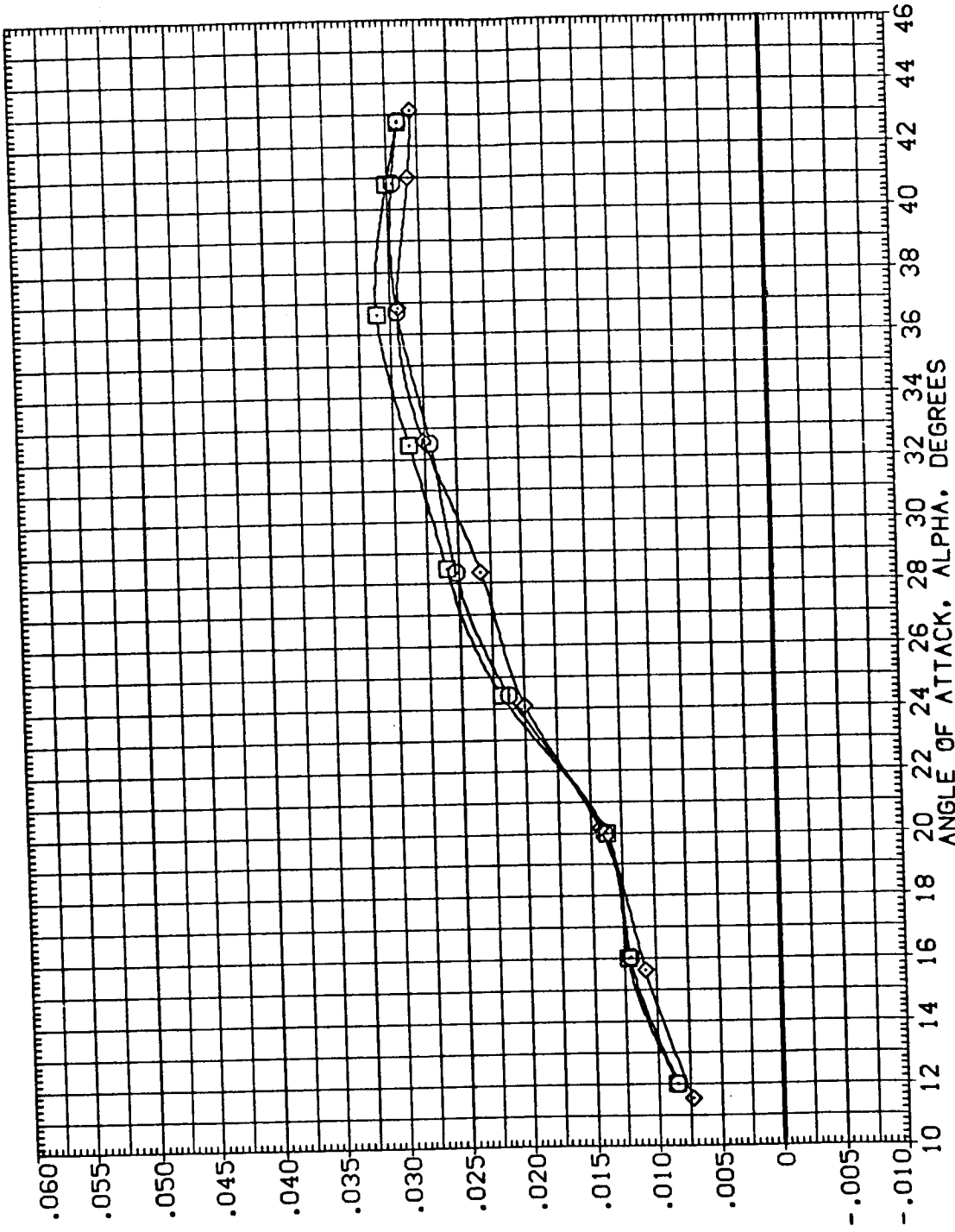


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL  
(EE0003)  
(EE0011)  
(EE0019)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7+M14)  
AMES 3.5-190 0A98 (011-M7+M14-N24)  
AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
-40.000  
-40.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

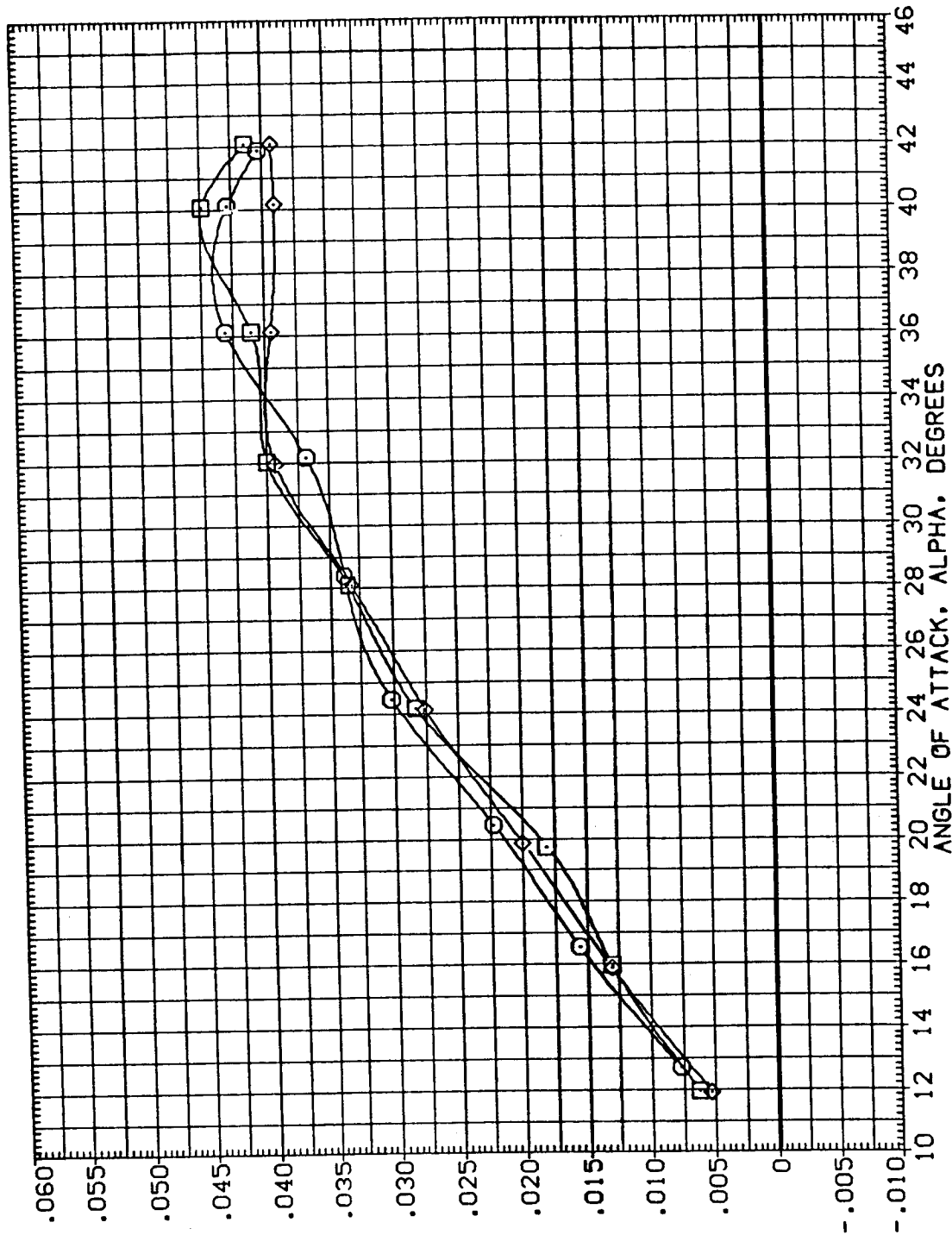


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EE0003) AMES 3.5-190 0A98 (011-M7-M14)

(EE0011) AMES 3.5-190 0A98 (011-M7-M14-N24)

(EE0019) AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA .000

ELEVON -40.000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.8800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

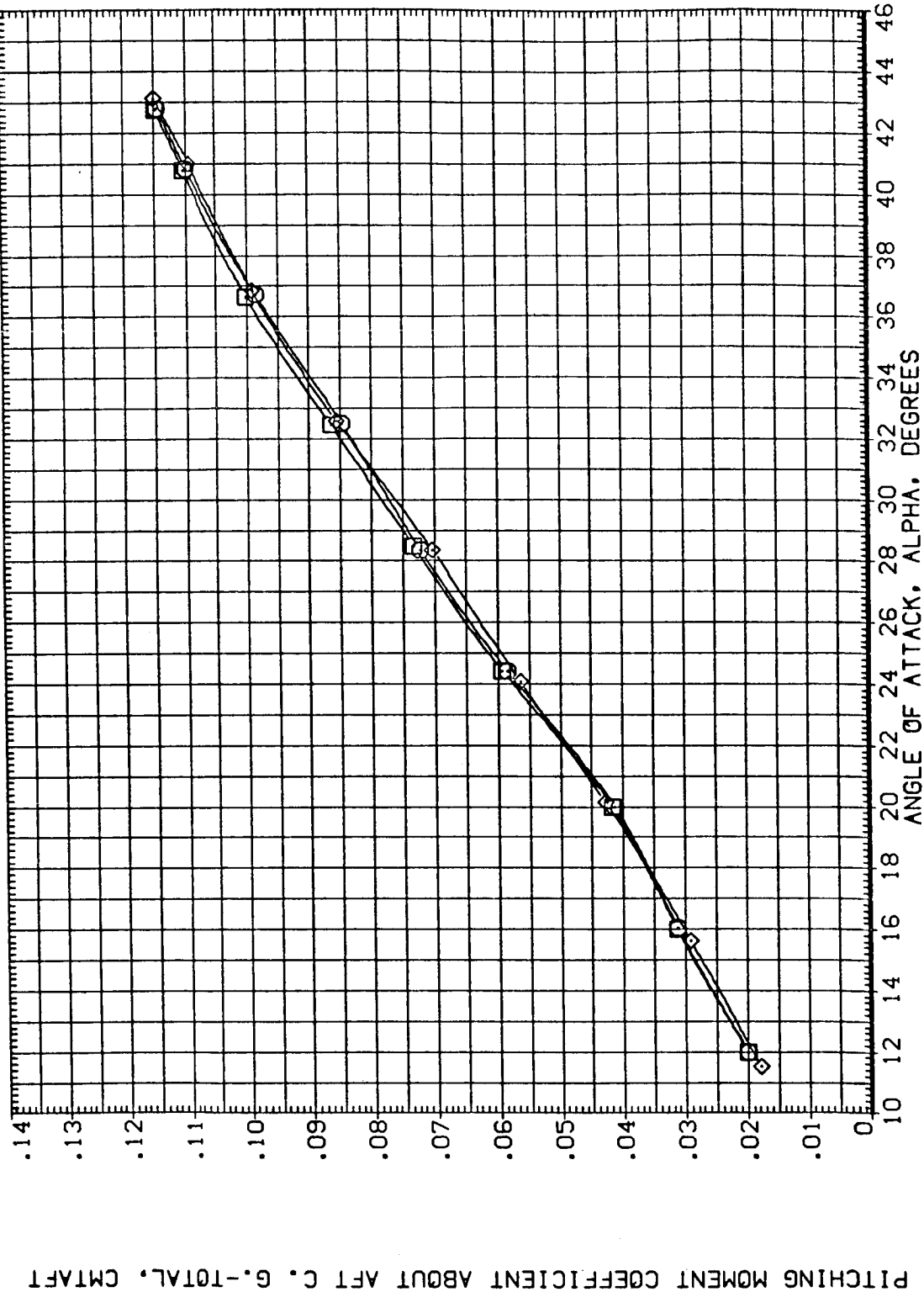


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0003)	AMES 3.5-190 OA98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0011)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 OA98 (011-M7-M14-N24-DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

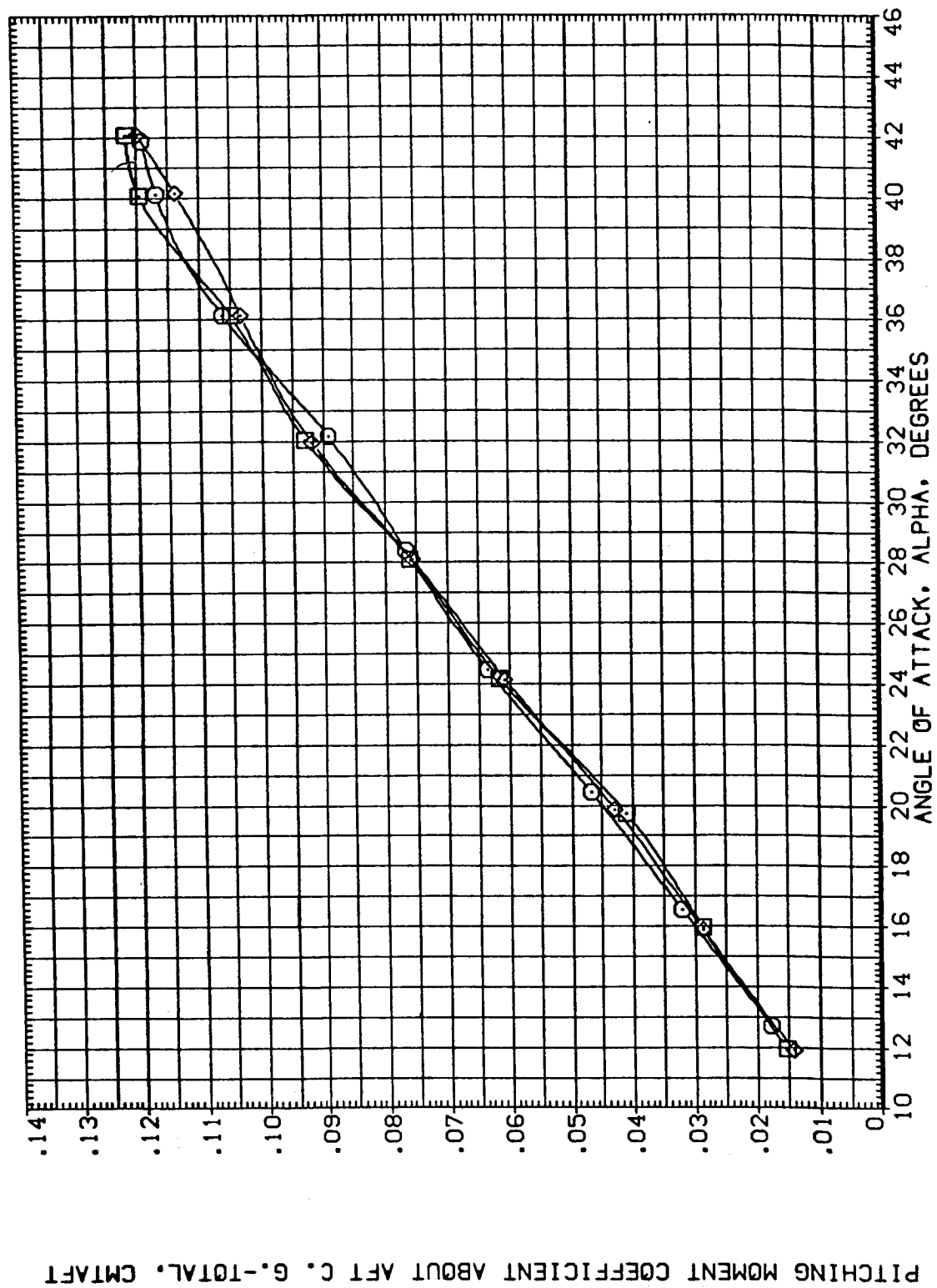


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(EE0003)  
(EE0011)  
(EE0019)

# CONFIGURATION DESCRIPTION

AVES 3.5-190 GA98 (011-M7+H14)  
AVES 3.5-190 GA98 (011-M7+H14-N24)  
AVES 3.5-190 GA98 (011-M7+H14-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
-40.000  
-40.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPDBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.  
YMRP .0000 IN.  
ZMRP 375.0000 IN.  
SCALE .0150

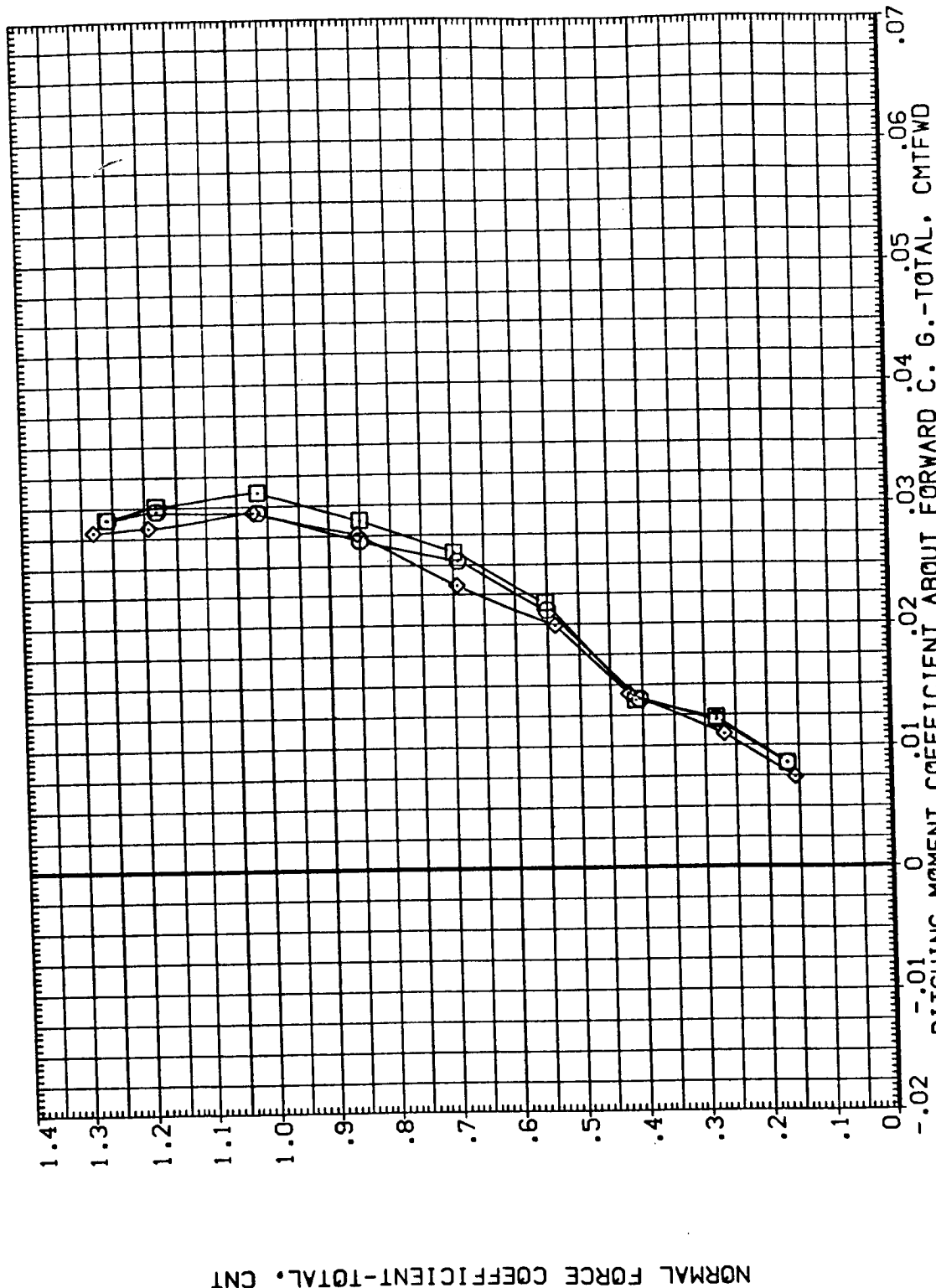


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EE0003)	AVES 3.5-190 OA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0011)	AVES 3.5-190 OA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AVES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

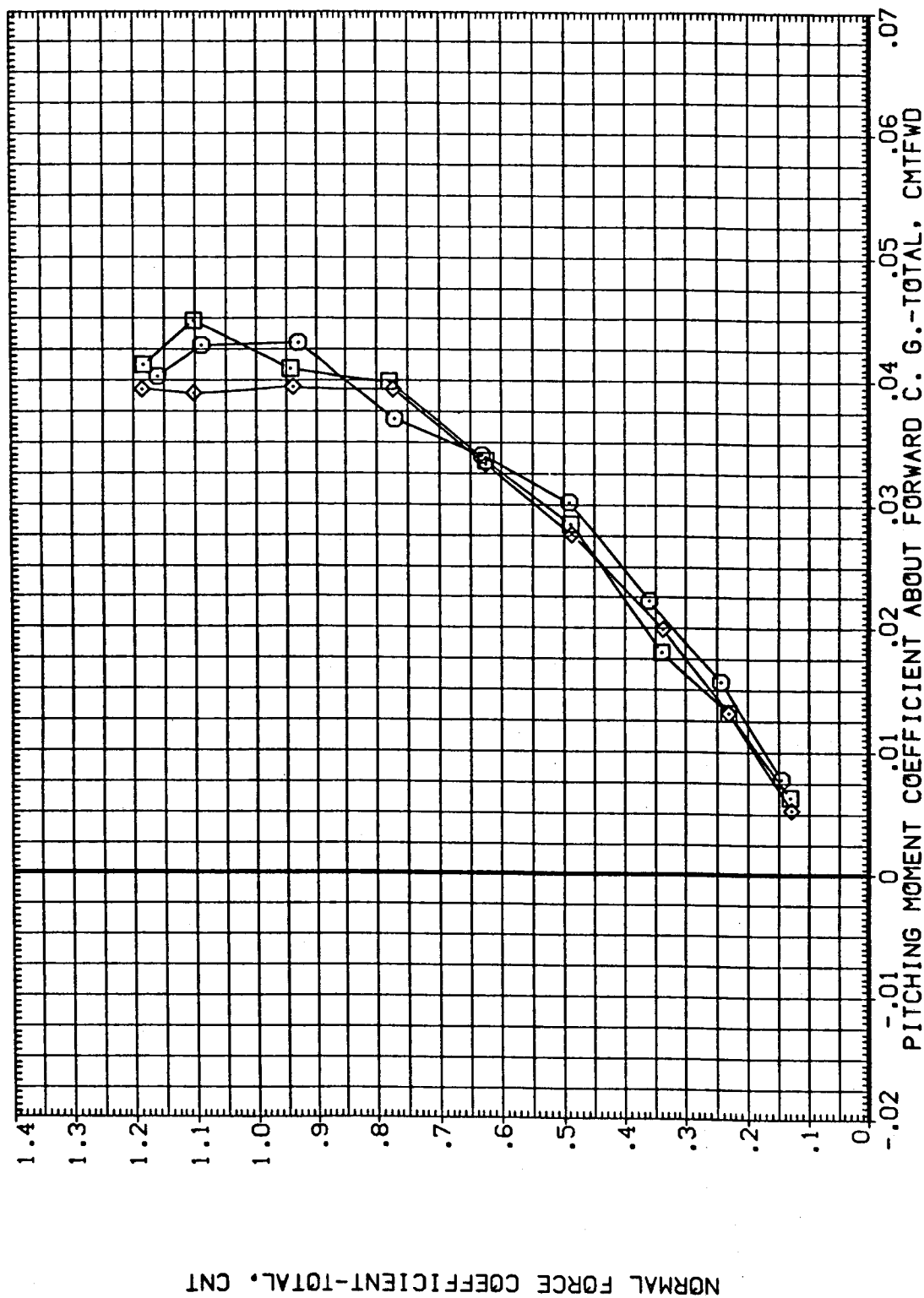


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EEQ003) AMES 3.5-190 0A98 (011-M7-H14)

(EEQ011) AMES 3.5-190 0A98 (011-M7-H14-N24)

(EEQ019) AMES 3.5-190 0A98 (011-M7-H14-N24-DUMMY STING)

BETA .000

ELEVON -40.000

BOFLAP -11.700

SPOBRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.X0

YMRP 1076.7000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

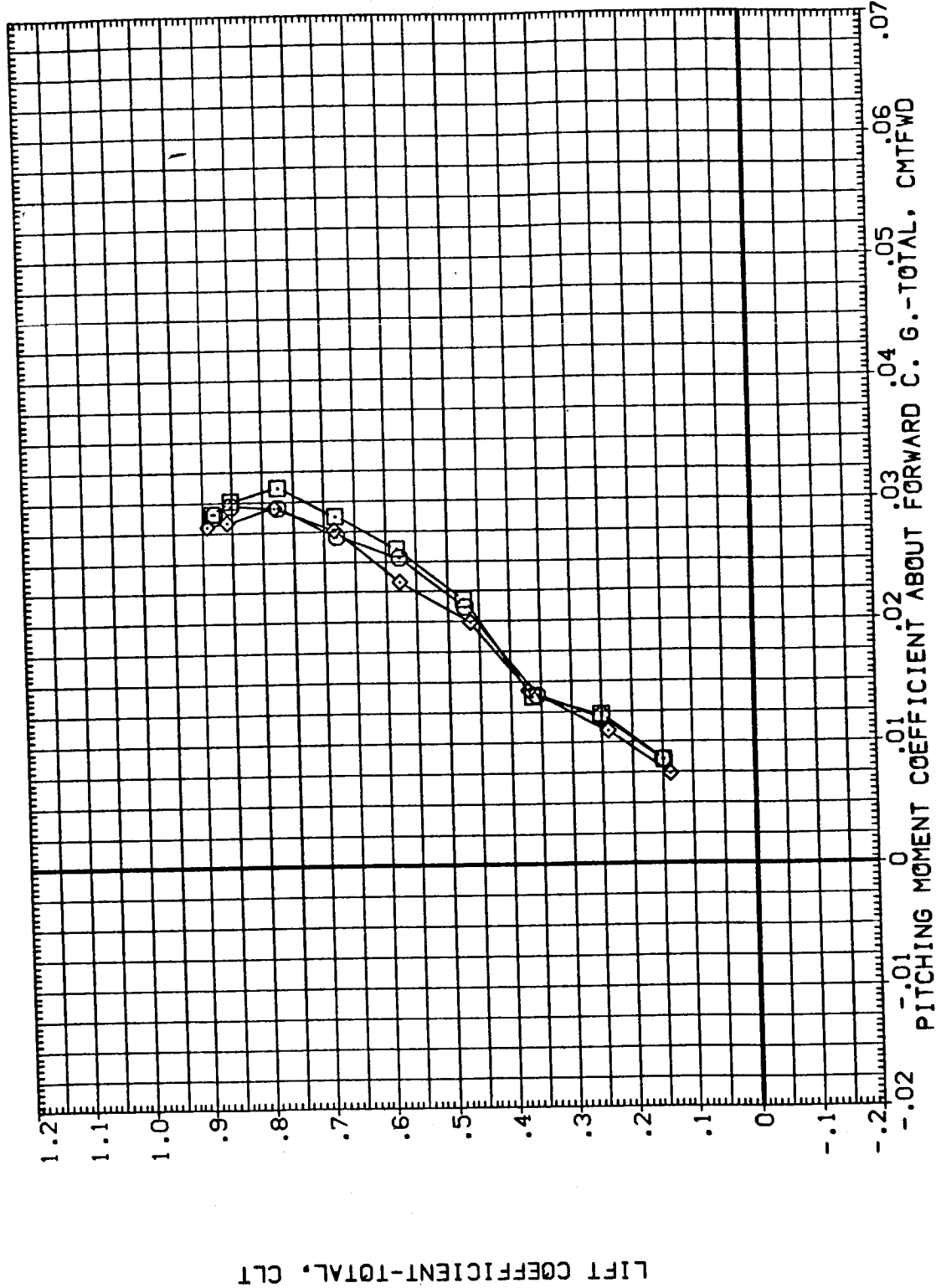
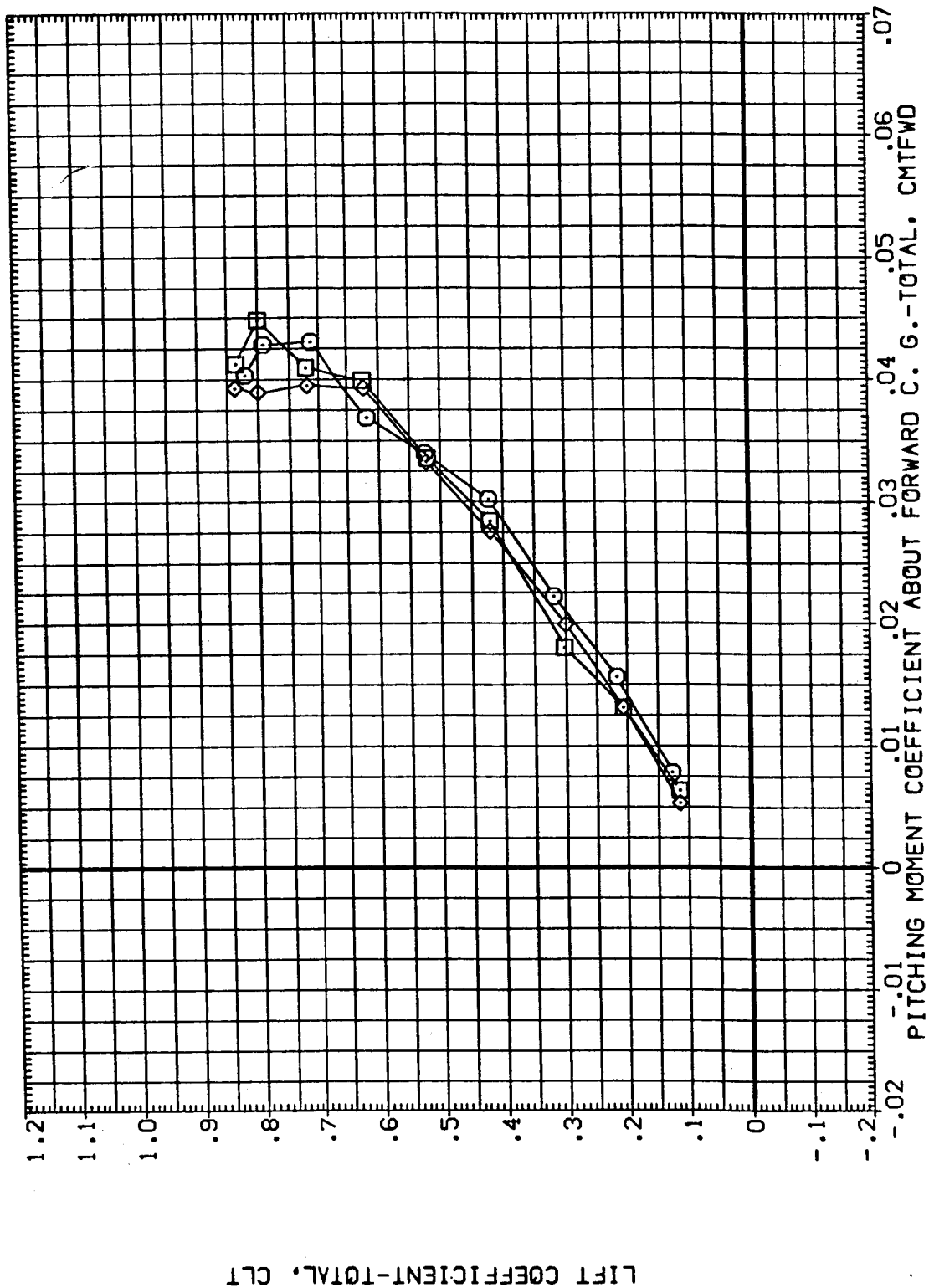


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN. X0
						XMRP 1076.7000 IN. Y0
						YMRP .0000 IN. Z0
						ZMRP 375.0000 IN. Z0
						SCALE .0150



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
{EEQ003}	N <sup>+</sup> ES 3.5-190 0/98 (011-M7+M14)
{EEQ011}	N <sup>+</sup> ES 3.5-190 0/98 (011-M7+M14-N24)
{EEQ019}	N <sup>+</sup> ES 3.5-190 0/98 (011-M7+M14-N2+DUPPLY STING)

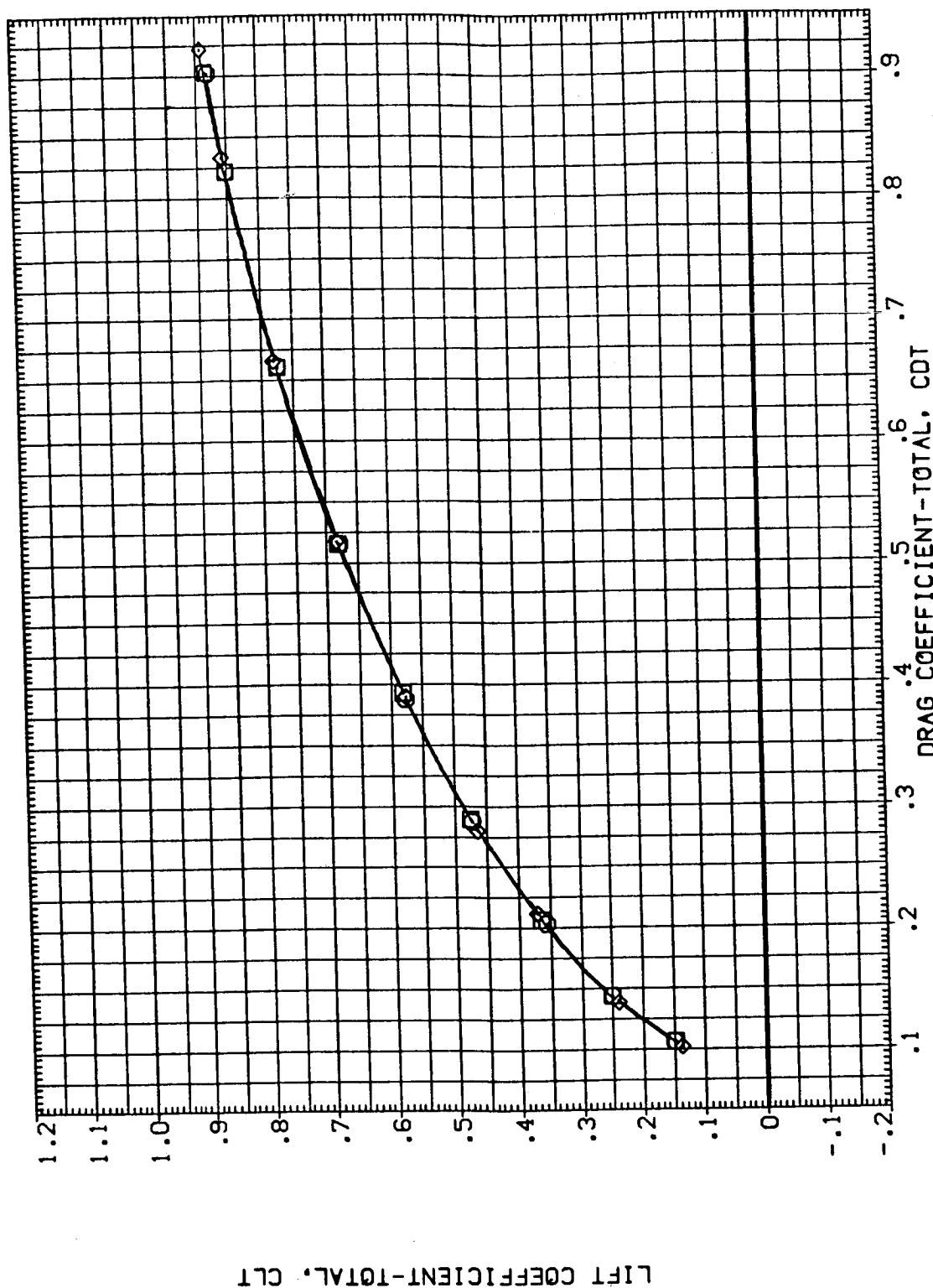


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION    BETA    ELEVON    BOFLAP    SPOBRK    REFERENCE INFORMATION

(EE0003)    AMES 3.5-190 0A98 (011-M7+M14)    .000    -40.000    -11.700    55.000    SREF 2690.0000    50.FT.

(EE0011)    AMES 3.5-190 0A98 (011-M7+M14-N24)    .000    -40.000    -11.700    55.000    LREF 474.8000    IN.

(EE0019)    AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)    .000    -40.000    -11.700    55.000    BREF 936.6800    IN.

YMRP 1076.7000    IN. X0  
ZMRP 375.0000    IN. Y0  
SCALE .0150    IN. Z0

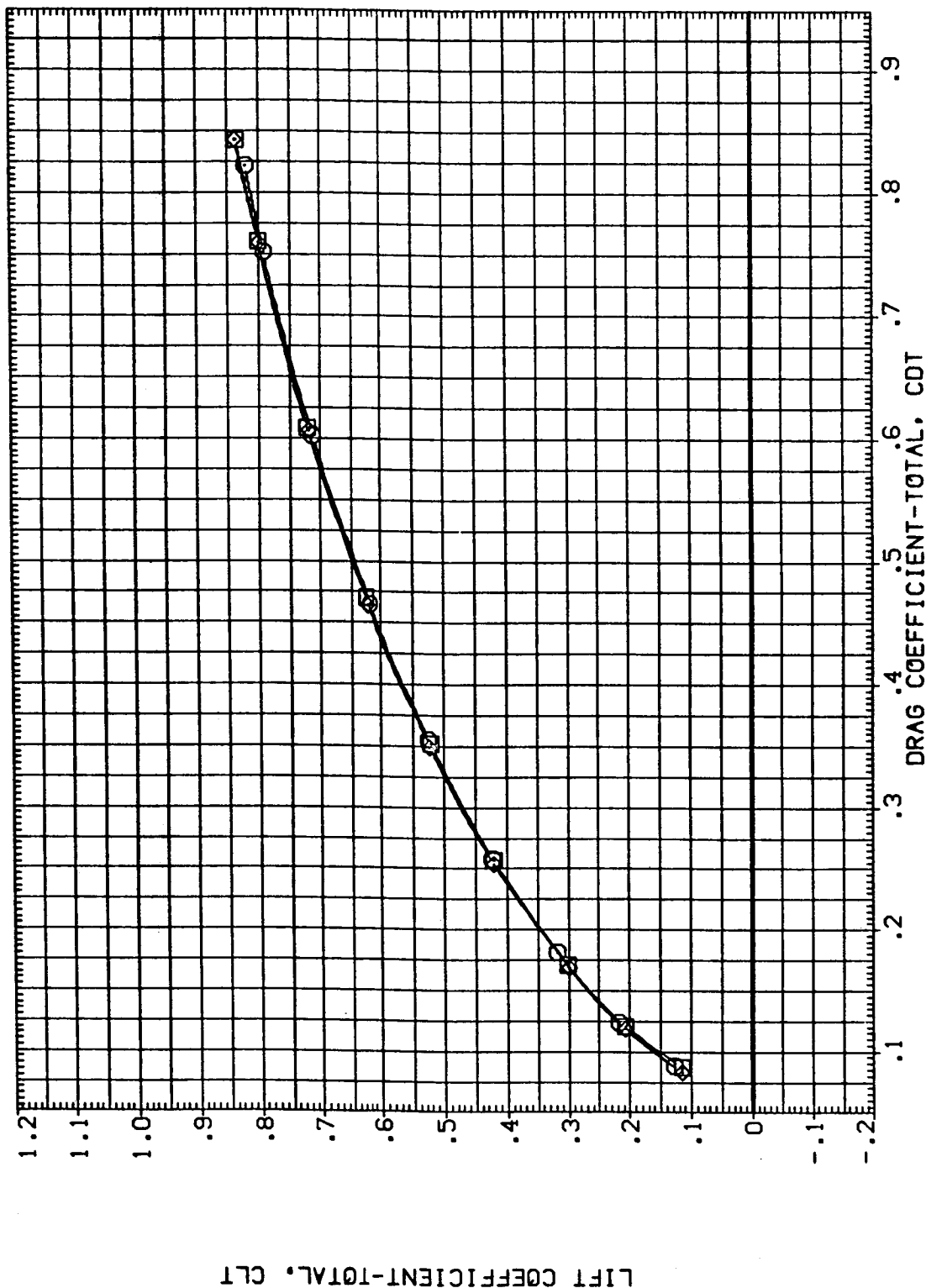


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(EE0003)  
(EE0011)  
(EE0019)

CONFIGURATION DESCRIPTION

AMES 3.5-190 0A98 (011-M7+M14)  
AMES 3.5-190 0A98 (011-M7+M14-N24)  
AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000  
.000

ELEVON  
-40.000  
-40.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPOBRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

FOREBODY DRAG COEFFICIENT, CDF

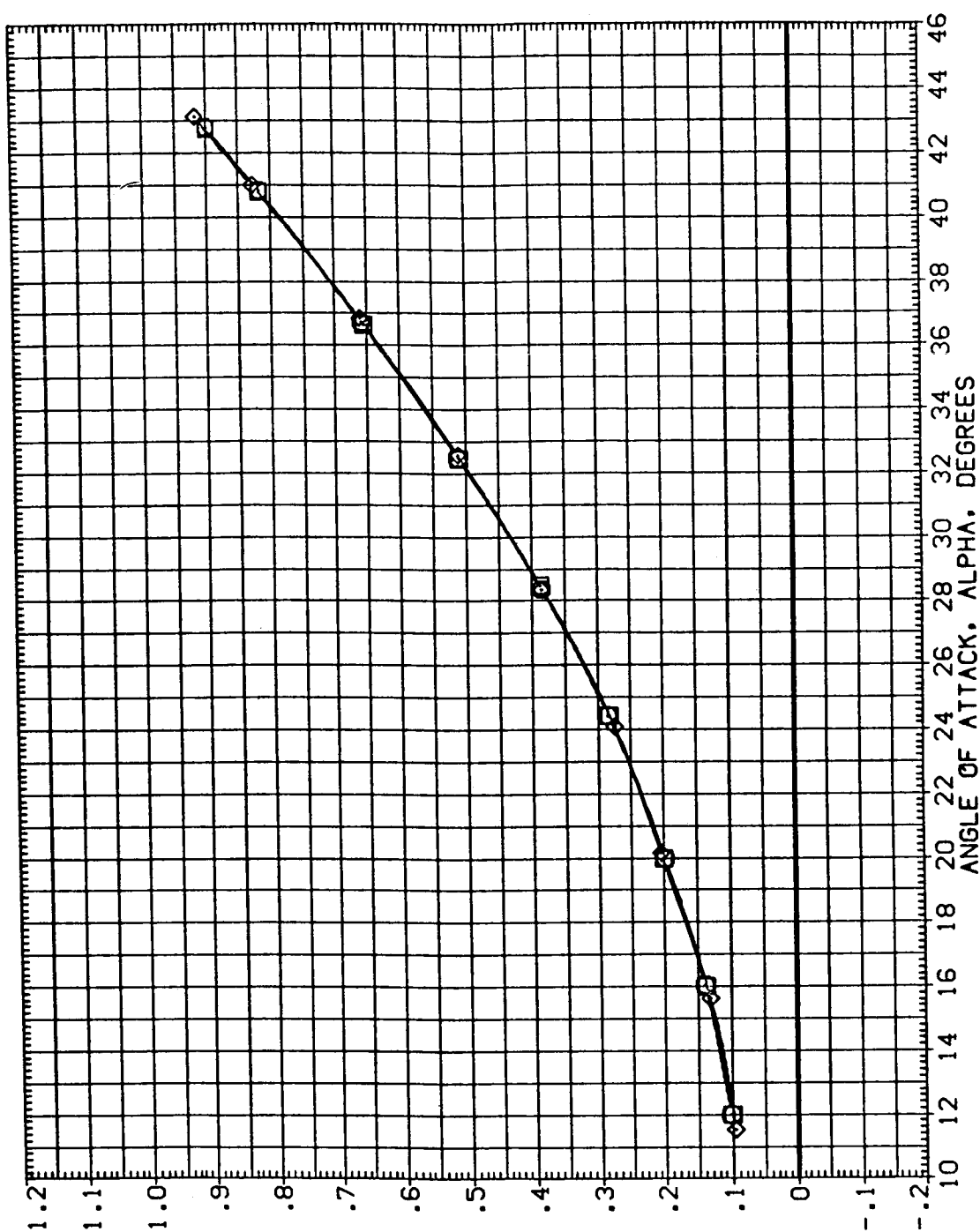


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0003)	AMES 3.5-190 DA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0011)	AMES 3.5-190 DA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 DA98 (011-M7+M14-N24+JUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

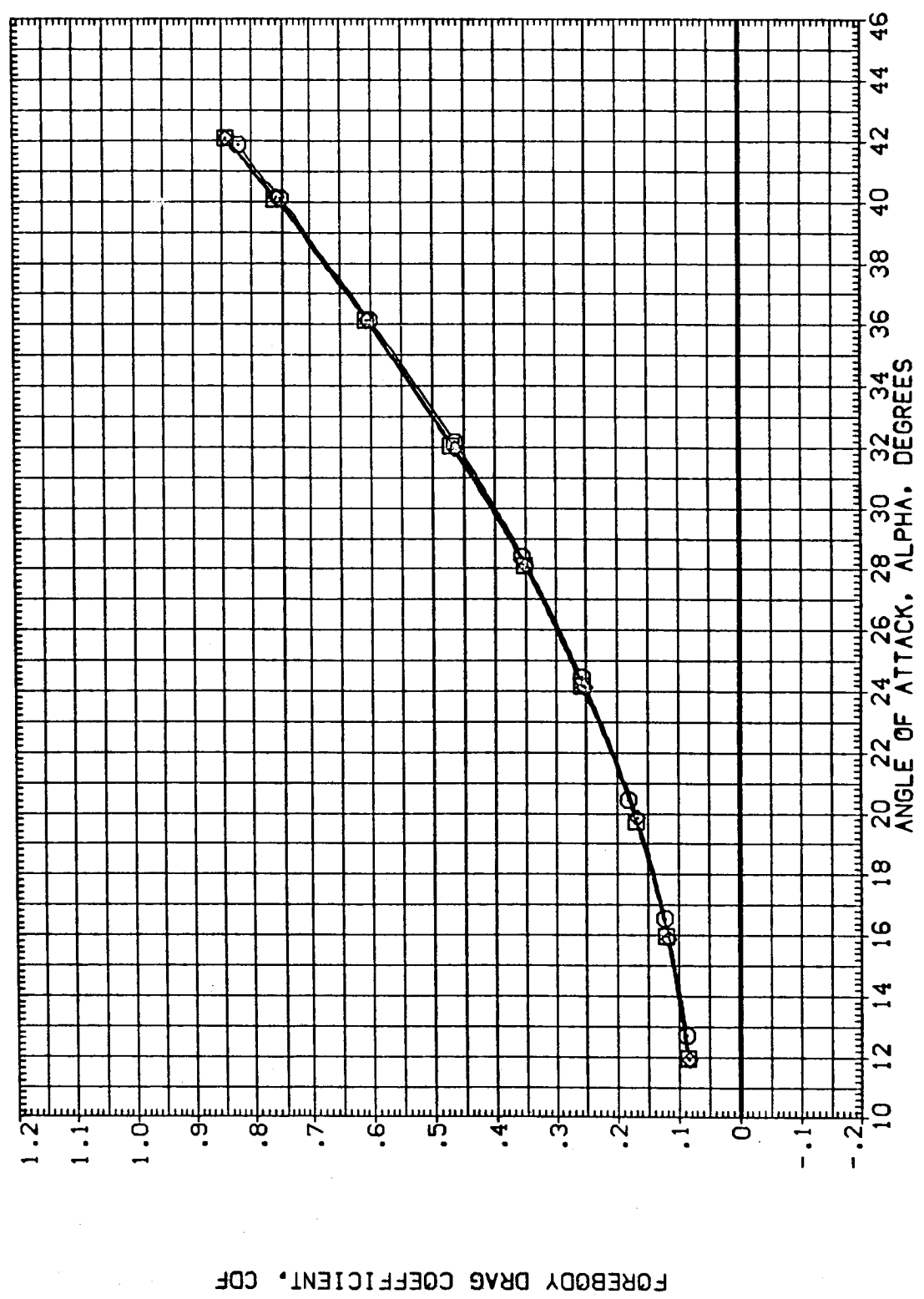


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEQ003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EEQ019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

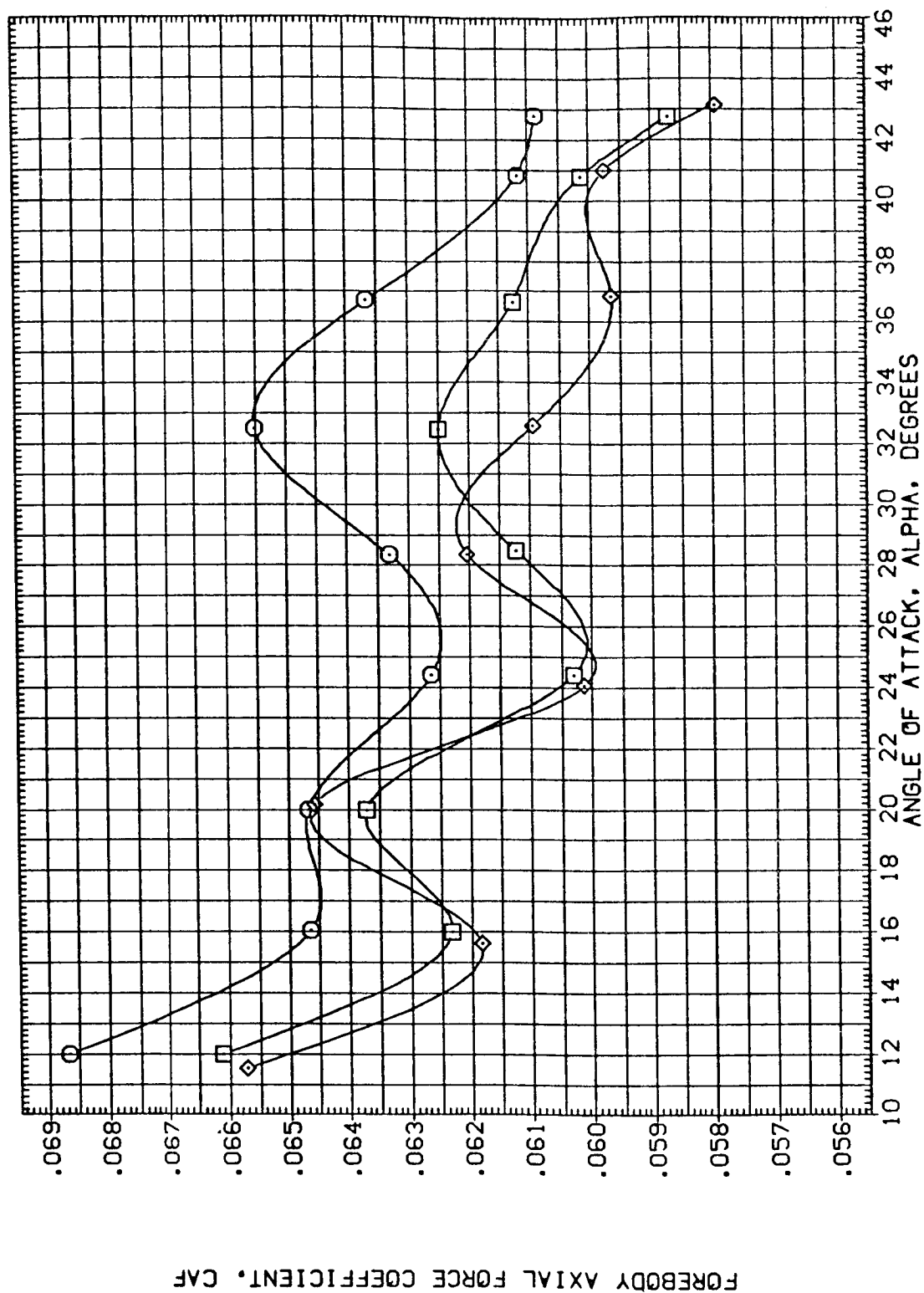


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP .0000 IN.ZB
						SCALE .0150

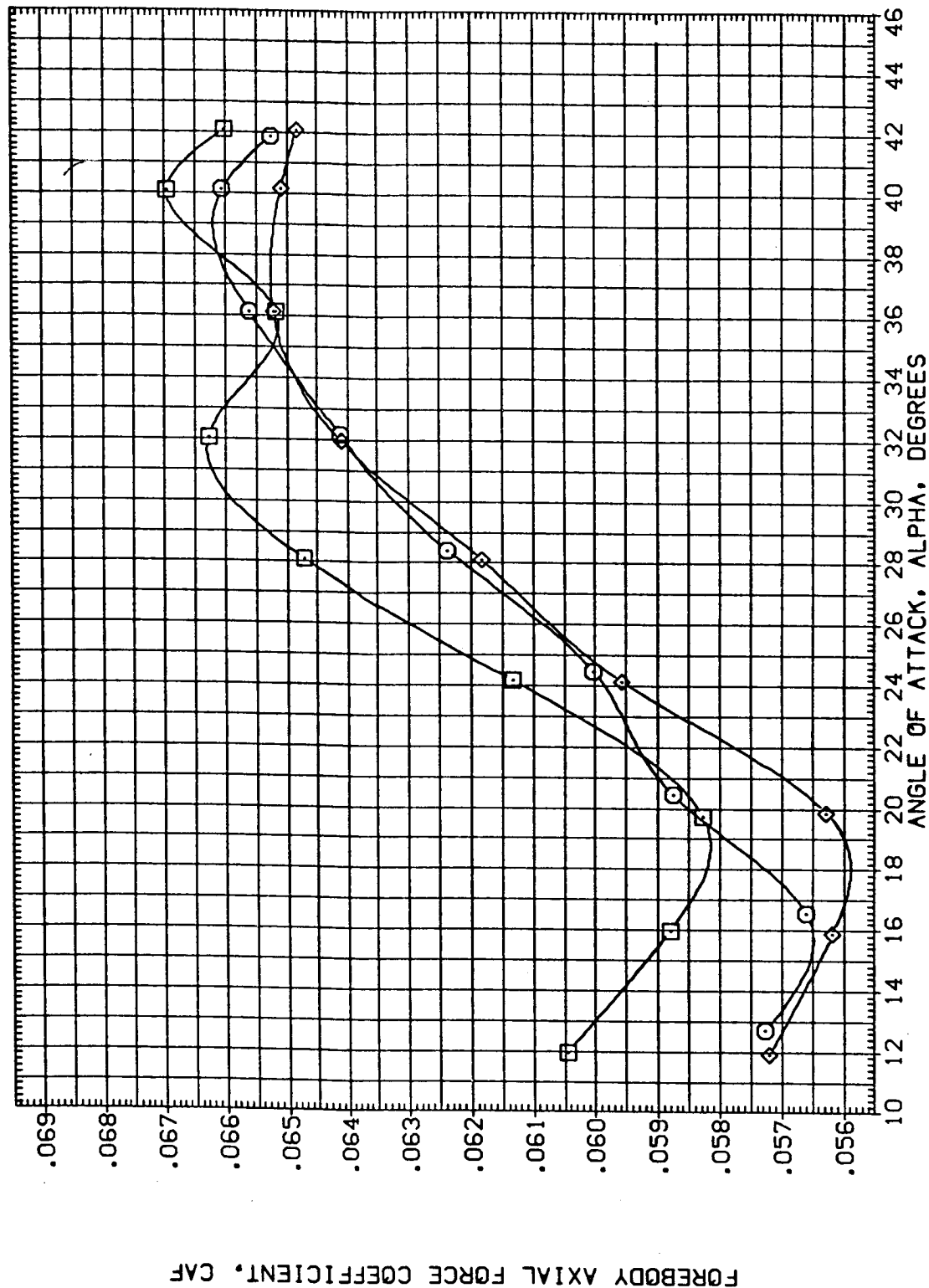


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEQ003)	AVES 3.5-190 0A98 (011-H7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EEQ011)	AVES 3.5-190 0A98 (011-H7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EEQ019)	AVES 3.5-190 0A98 (011-H7-M14-N24-DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

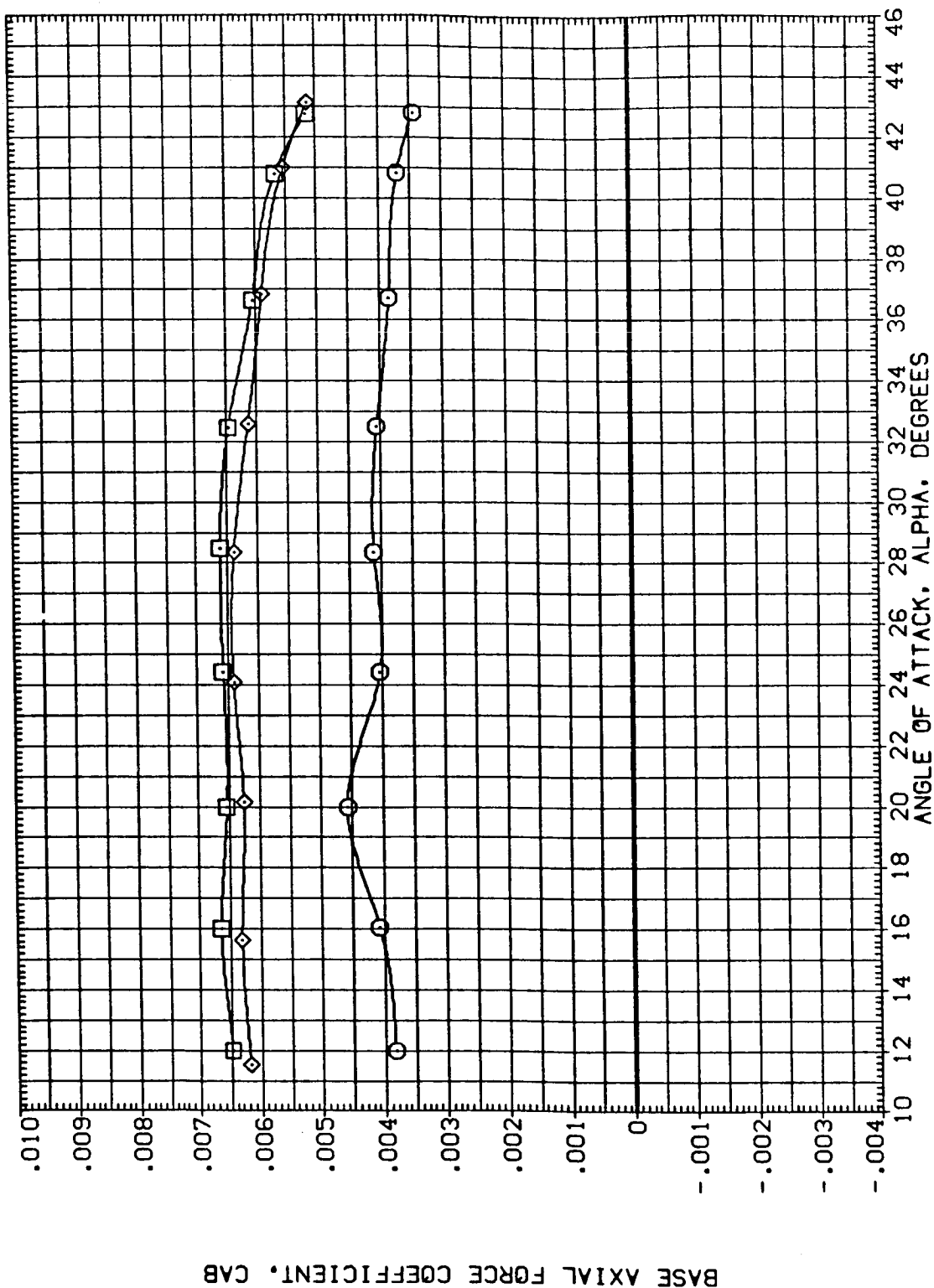


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION
(EE0003)	AMES 3.5-190 0A98 (011-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0011)	AMES 3.5-190 0A98 (011-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0019)	AMES 3.5-190 0A98 (011-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

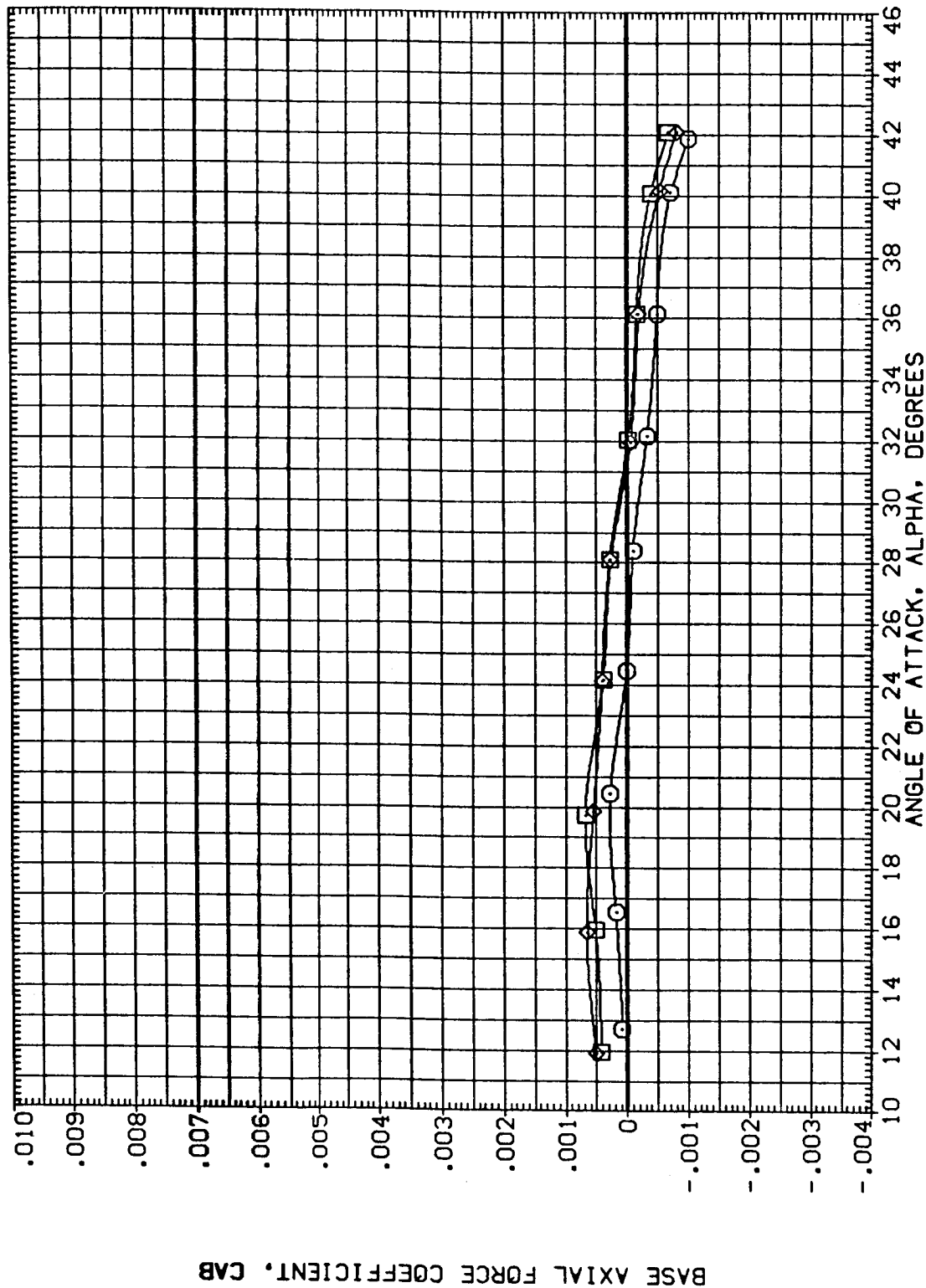


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(BE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.XG
						XMRP 1076.7000 IN.YG
						YMRP .0000 IN.ZG
						ZMRP 375.0000 IN.ZG
						SCALE .0150

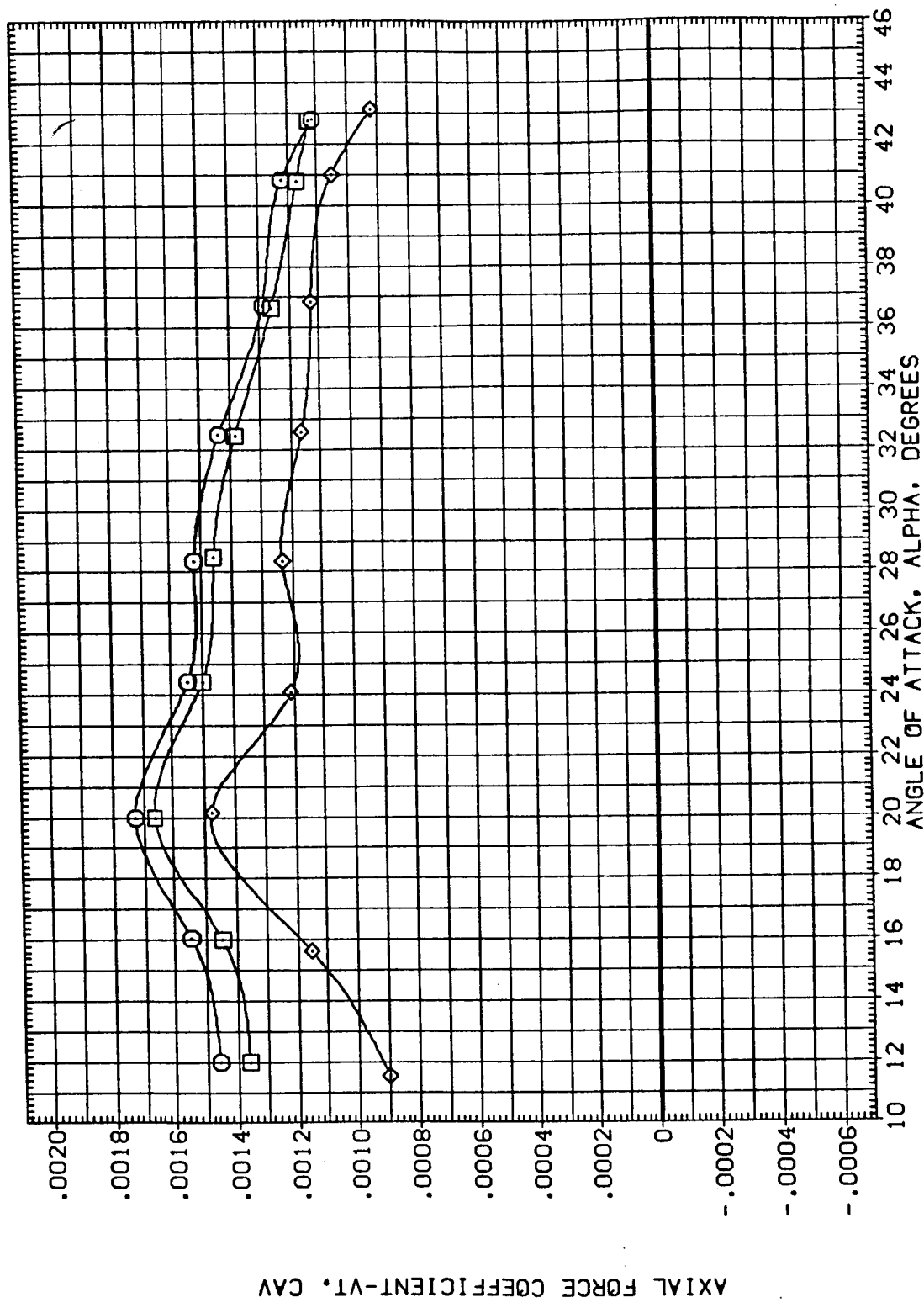


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(BE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

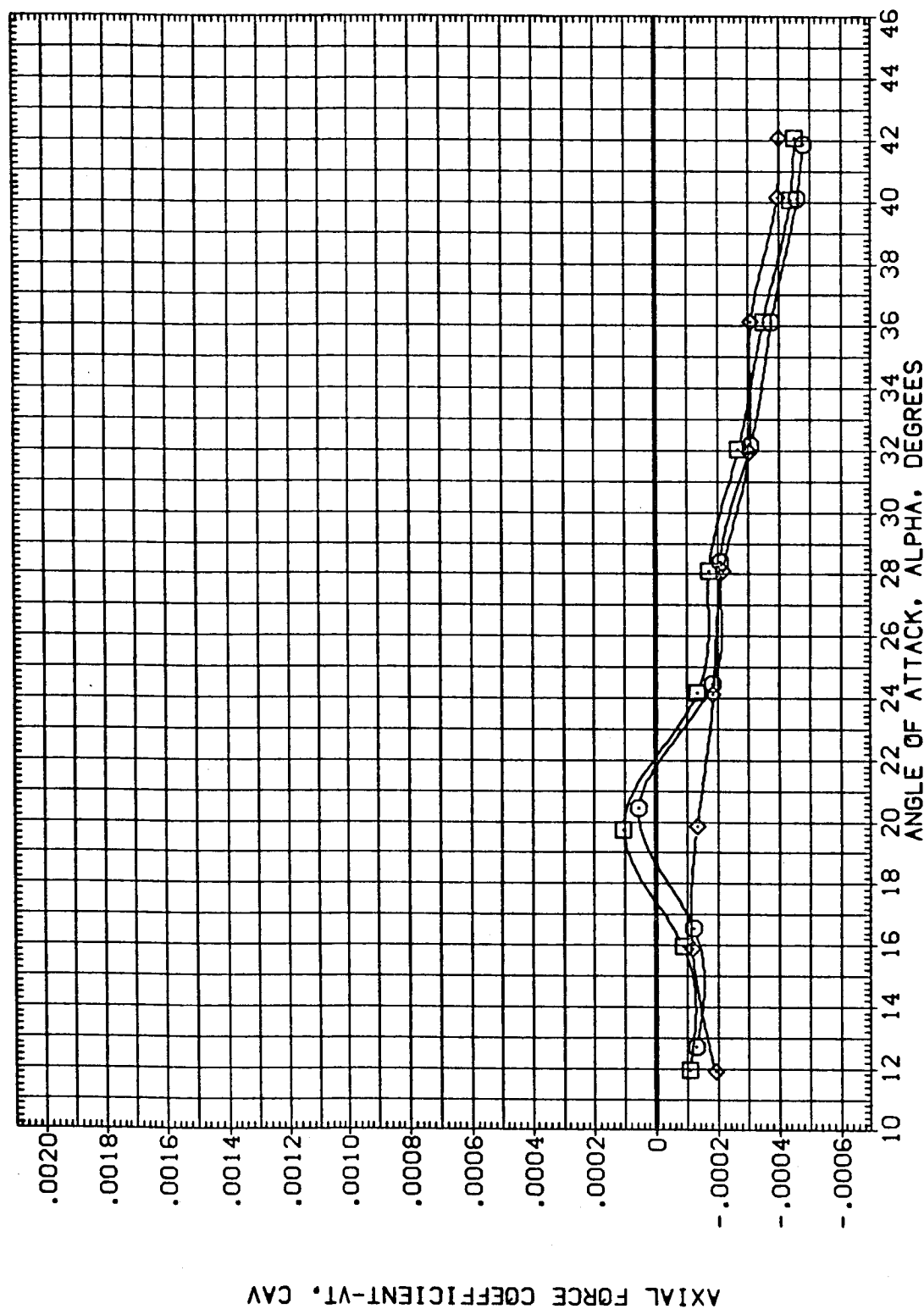


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(BE0003)	AMES 3.5-190 OA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0011)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(BE0019)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

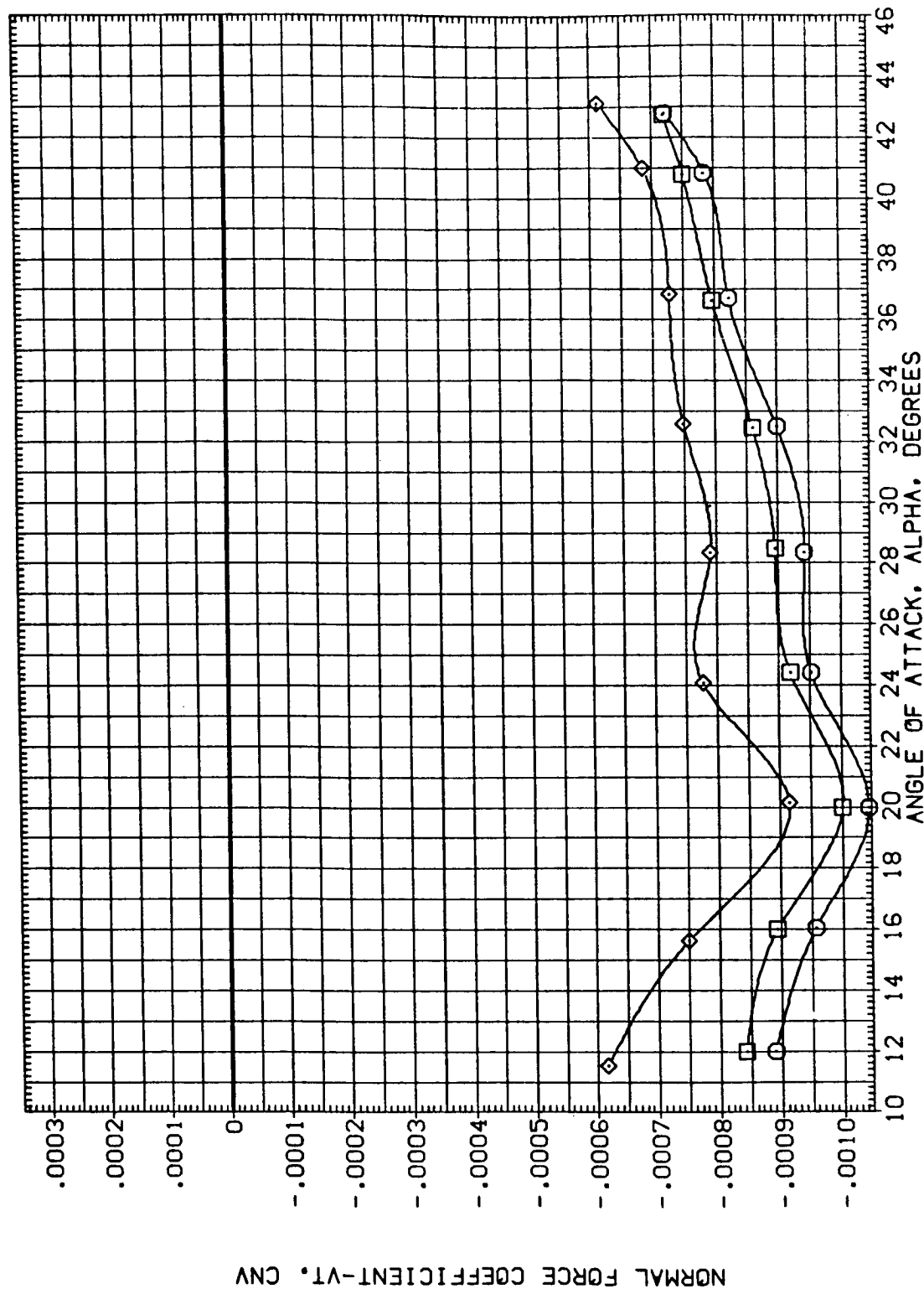


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(BEQ003)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEQ011)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(BEQ019)	AMES 3.5-190 0A98 (011-M7-M14-N24+JUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

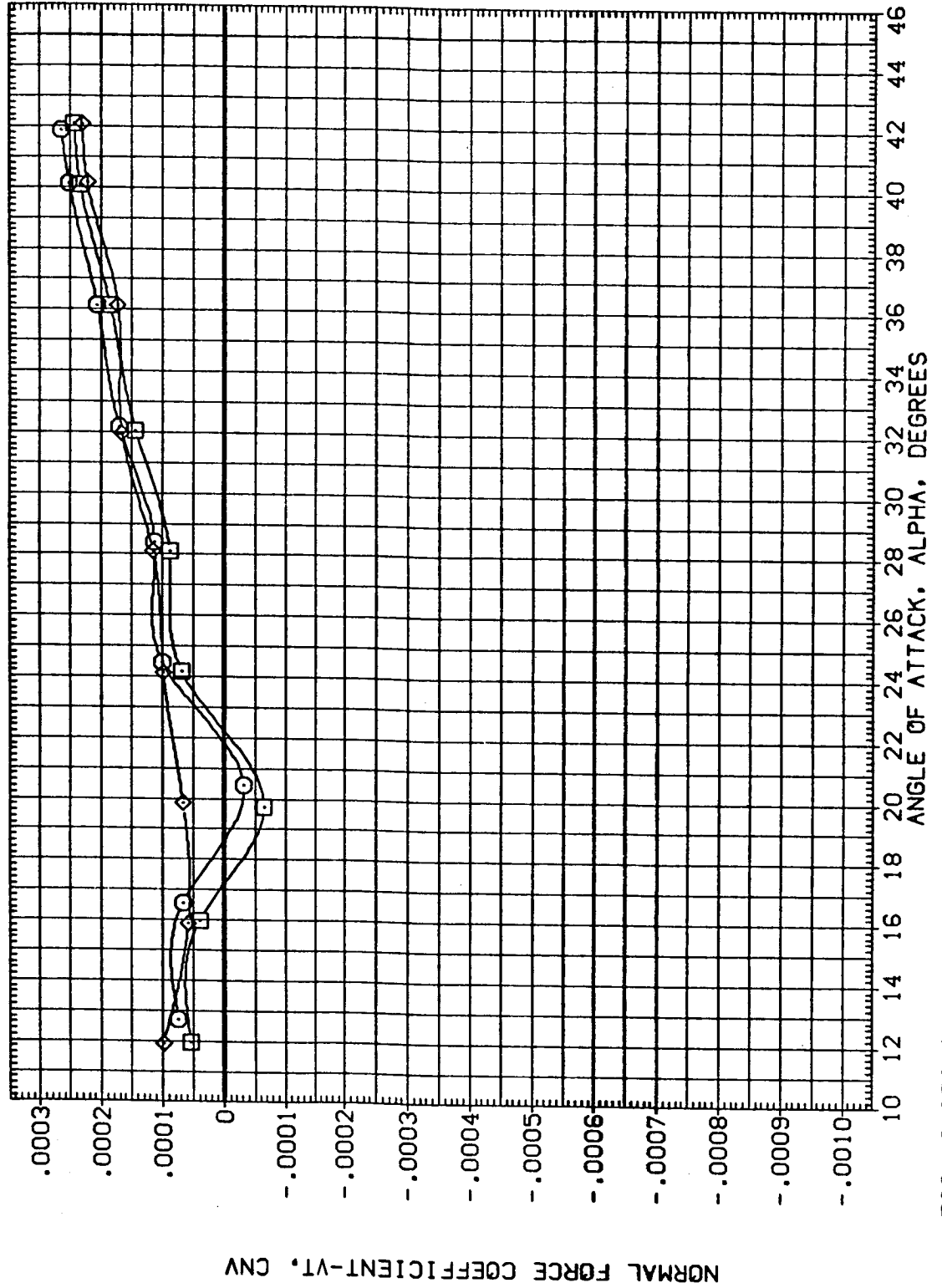


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL (BEG003) (BEG011) (BEG019)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 OA98 (011-M7+M14)  
 AMES 3.5-190 OA98 (011-M7+M14-N24)  
 AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000 .000

ELEVON -40.000 -40.000 -40.000

BOFLAP -11.700 -11.700 -11.700

SPOBRK 55.000 55.000 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

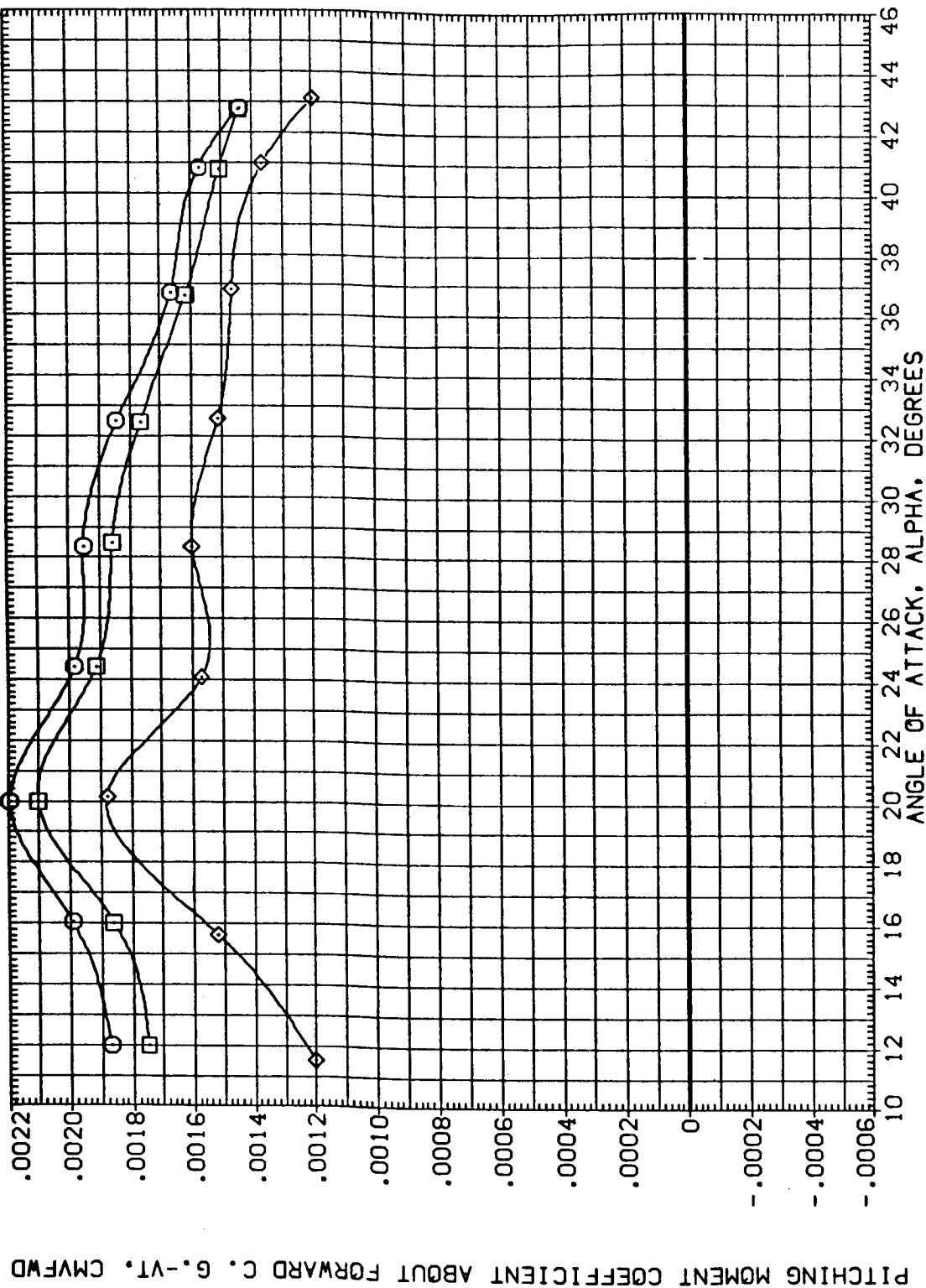


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BEG003)	AMES 3.5-190 0A98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(BEG011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(BEG019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.XB
						ZMRP .0000 IN.YB
						SCALE .0150

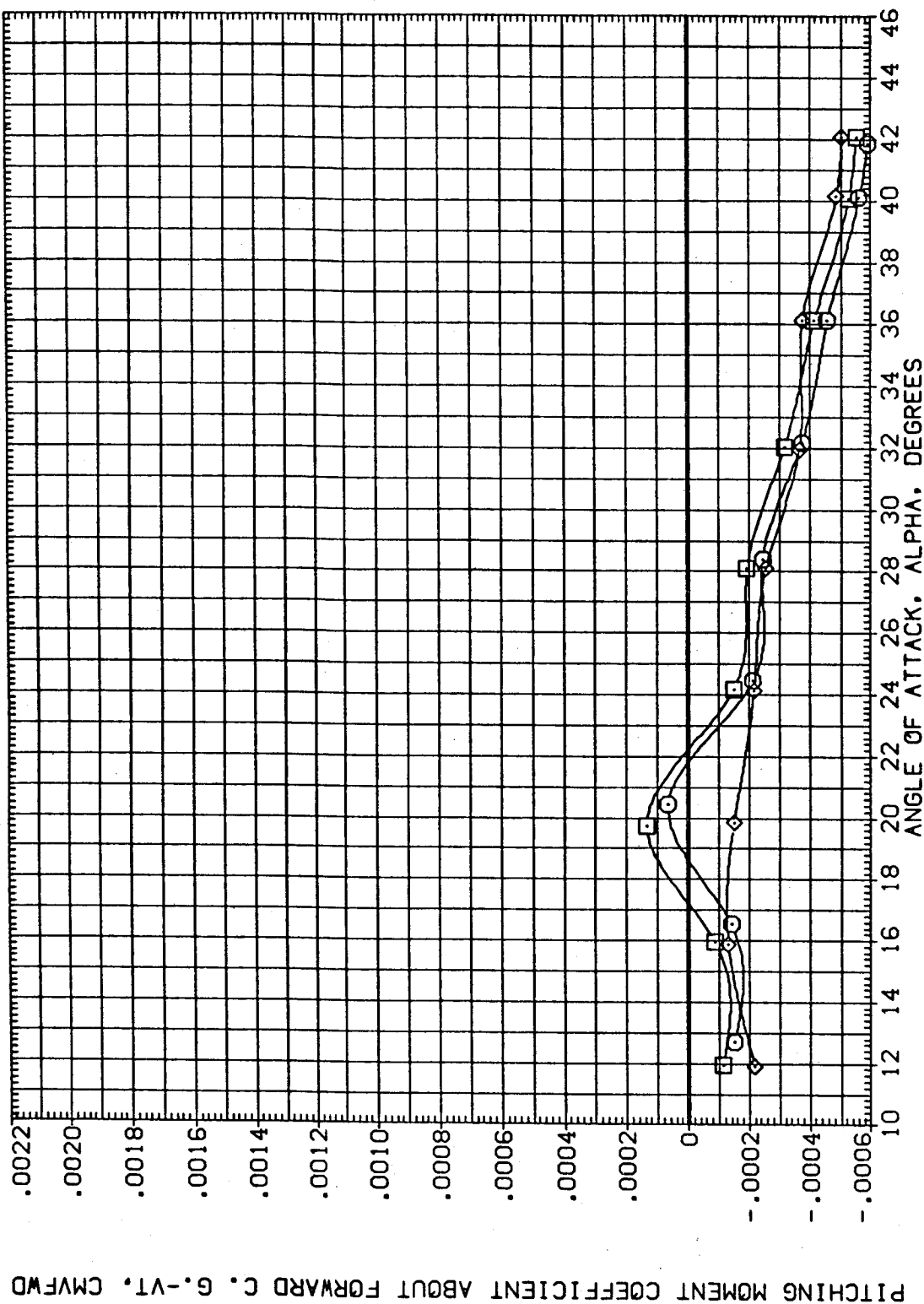


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE003)	AVES 3.5-190 DIA98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE001)	AVES 3.5-190 DIA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(BE0019)	AVES 3.5-190 DIA98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.8800 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMAVFT

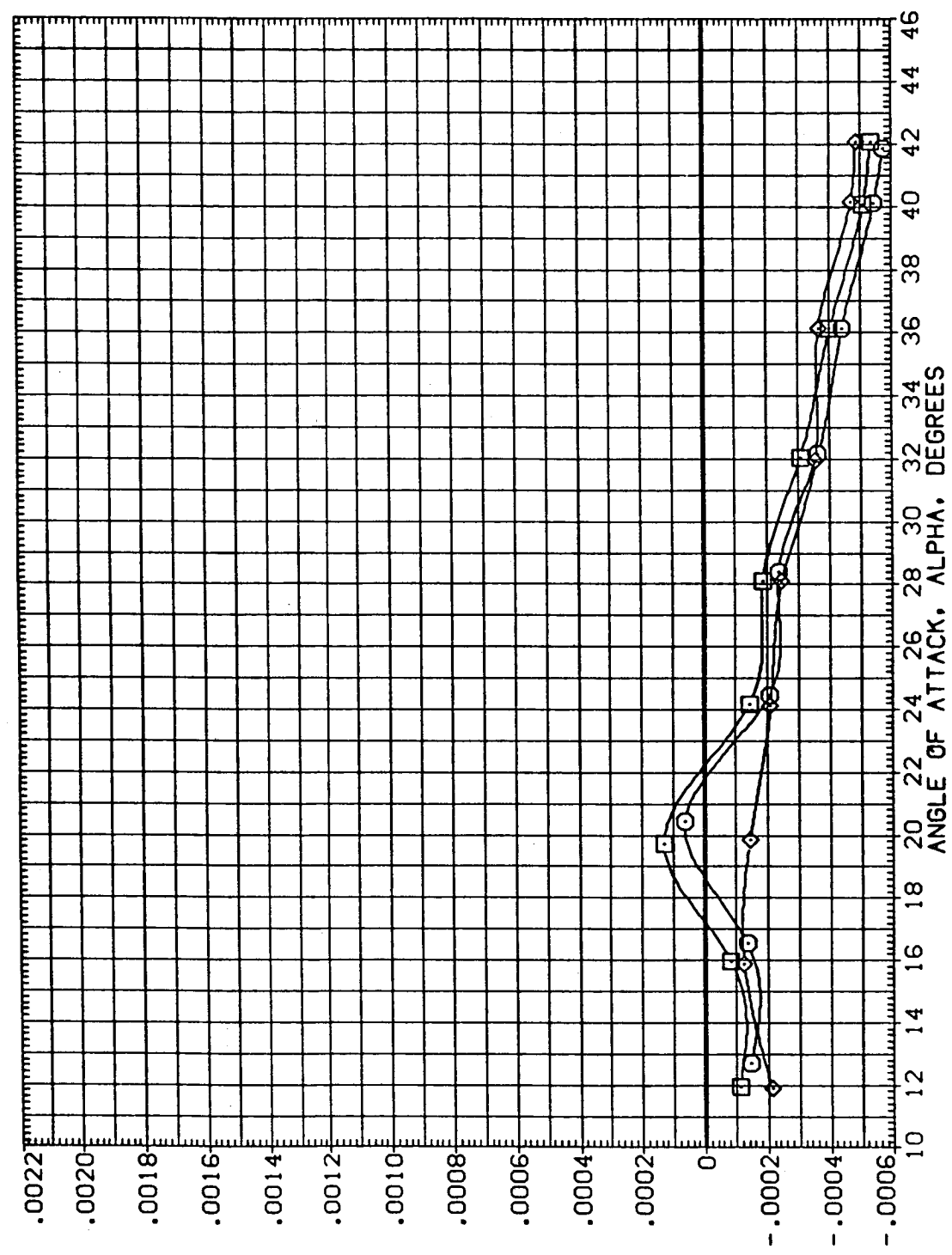


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL  
(VE0011)  
(VE0019)

CONFIGURATION DESCRIPTION

AMES 3.5-190 OA98 (011-M7-M14-N24)  
AMES 3.5-190 OA98 (011-M7-M14-N24-DUMMY STING)

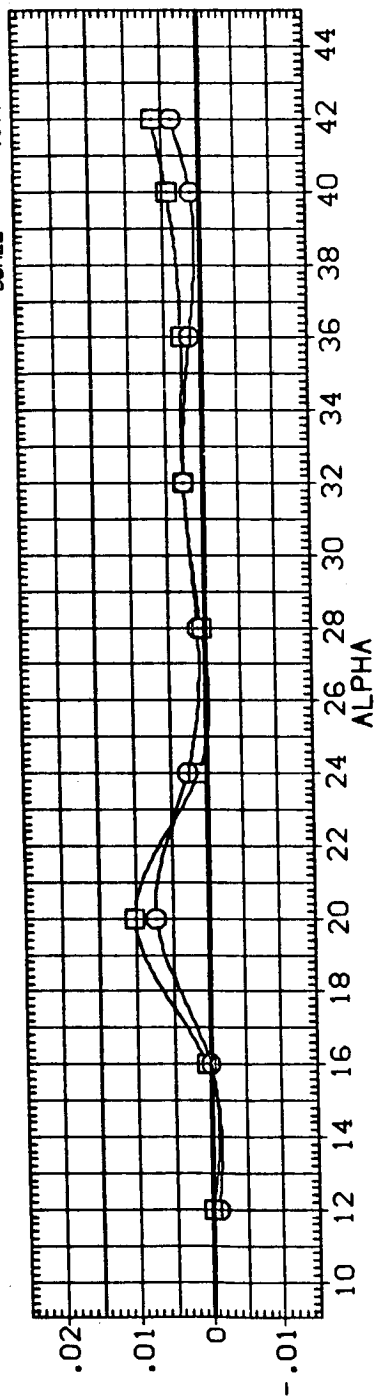
BETA  
.000  
.000

ELEVON  
-40.000  
-40.000

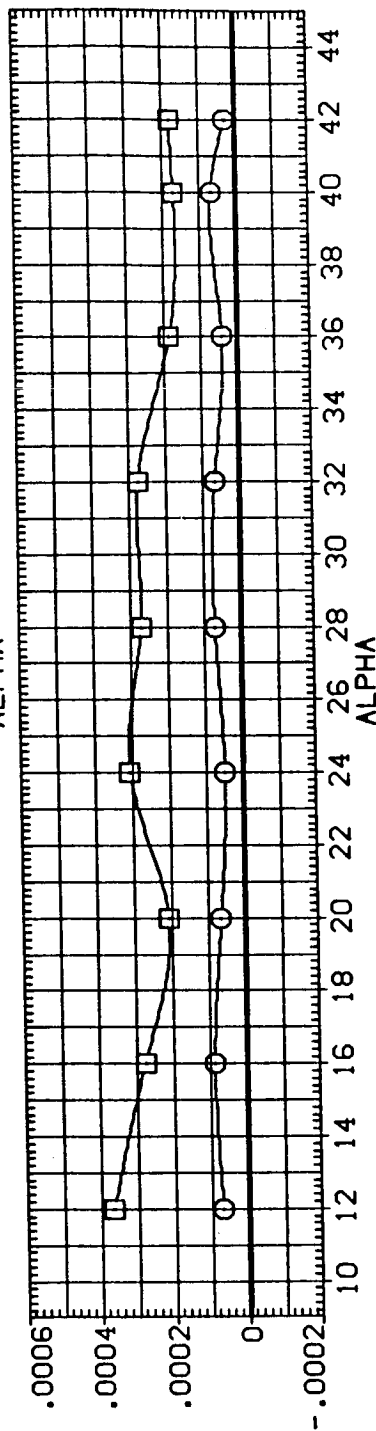
BOFLAP  
-11.700  
-11.700

SPDBRK  
55.000  
55.000

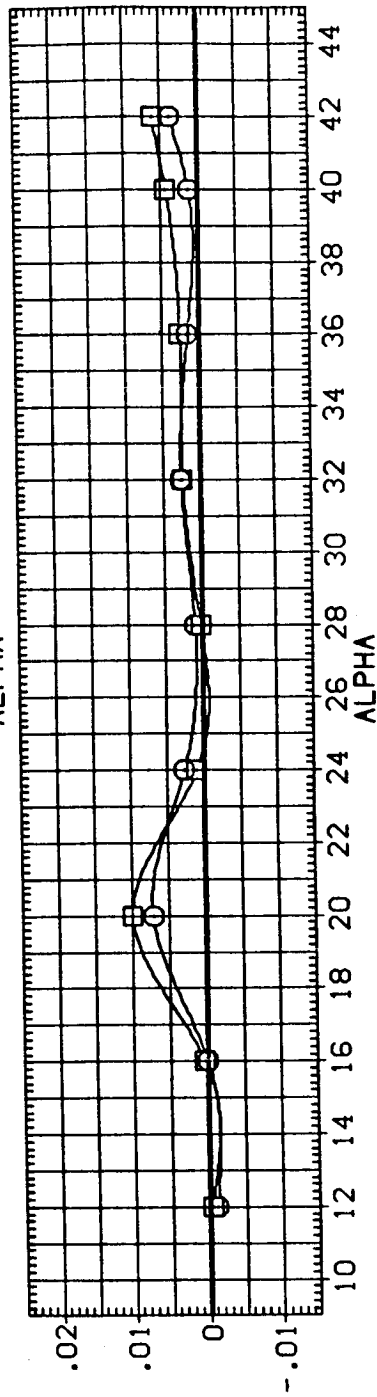
REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150



DCLT



DCLV



DCL

FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CA/MACH = 5.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (YEO011) AMES 3.5-190 0A98 (011-M7+M14-N24)  
 (YEO019) AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPOBRK  
 .000 -40.000 -11.700 55.000  
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 50.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

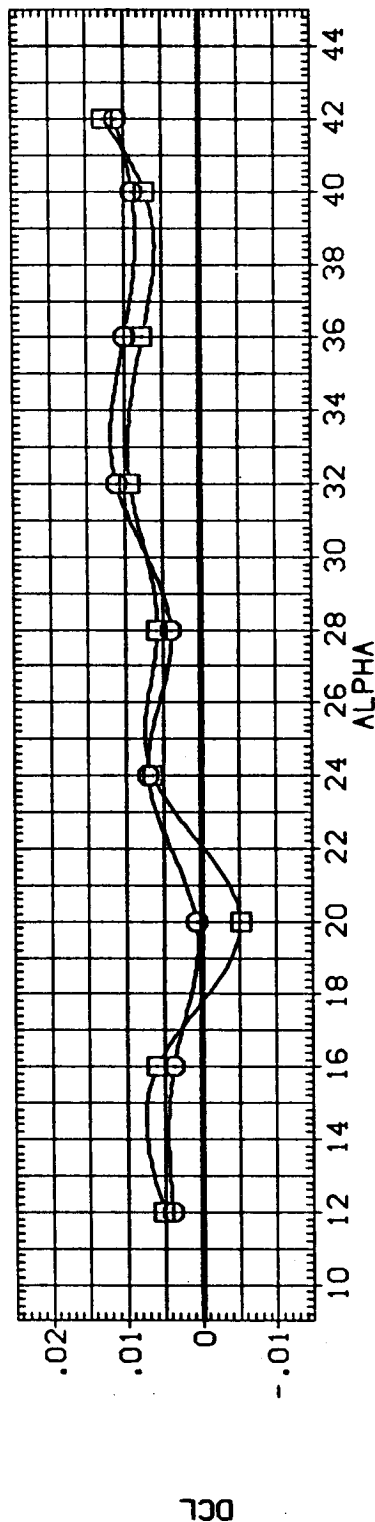
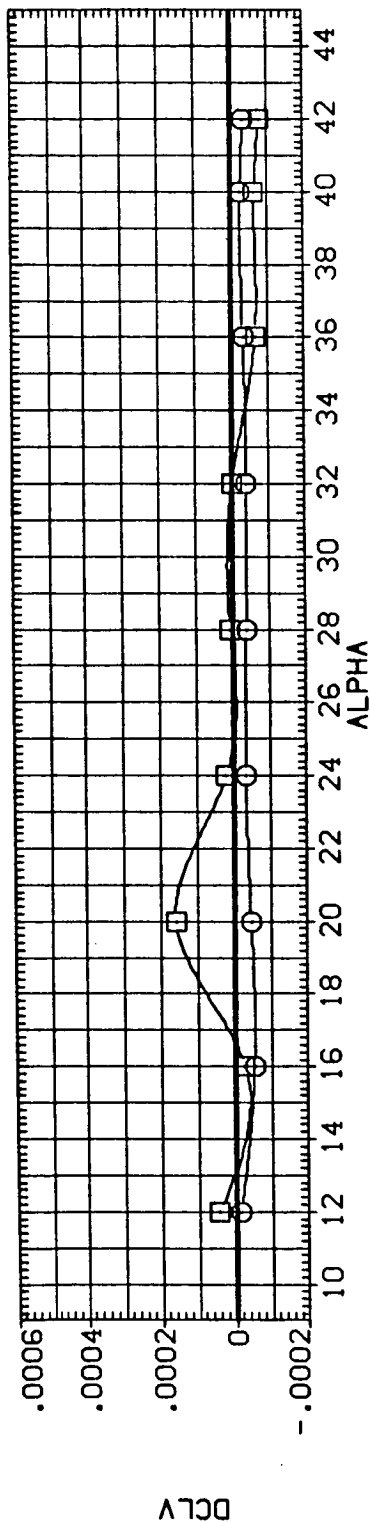
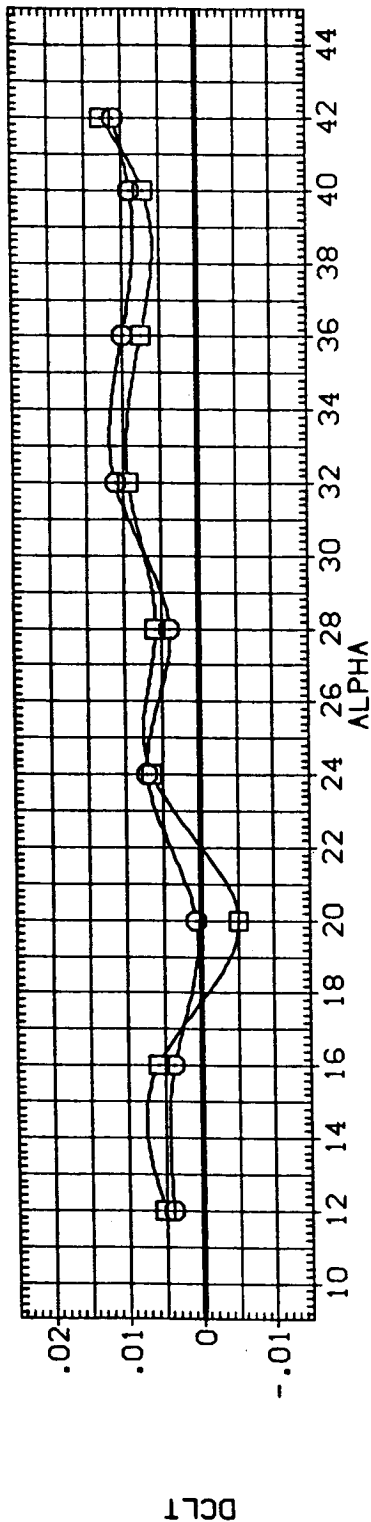


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL (Z00011) (Z00019)

CONFIGURATION DESCRIPTION  
 AVES 3.5-190 OAS8 (011-M7+M14-N24)  
 AVES 3.5-190 OAS8 (011-M7+M14-N24+DUMMY STING)

BETA  
 .000  
 .000

ELEVON  
 -40.000  
 -40.000

BDFLAP  
 -11.700  
 -11.700

SPOBRK  
 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

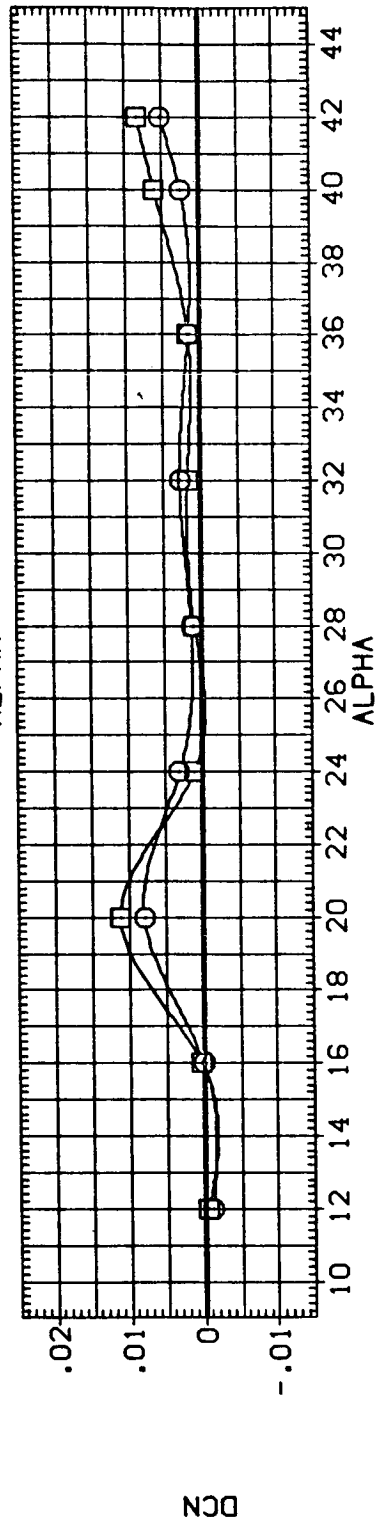
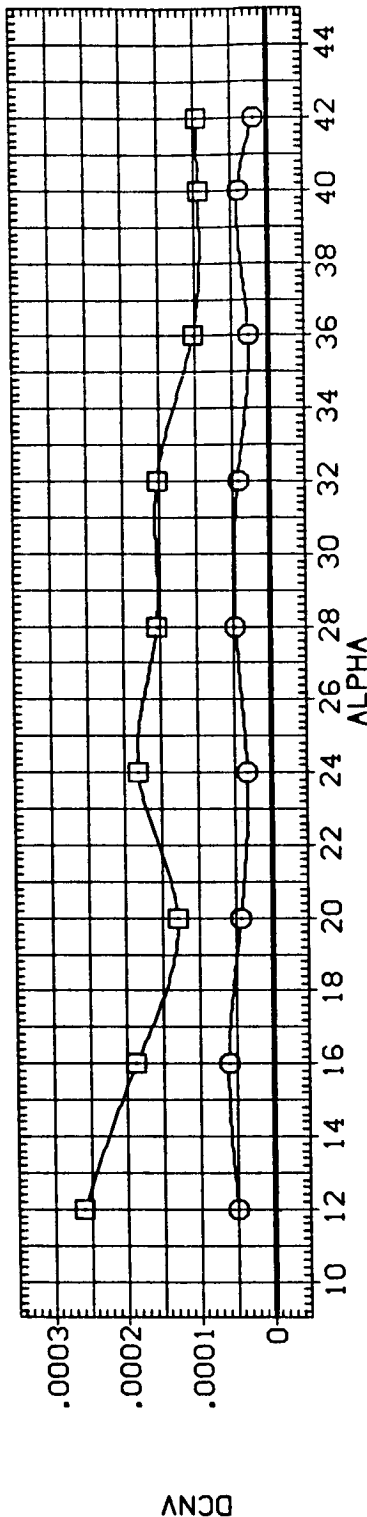
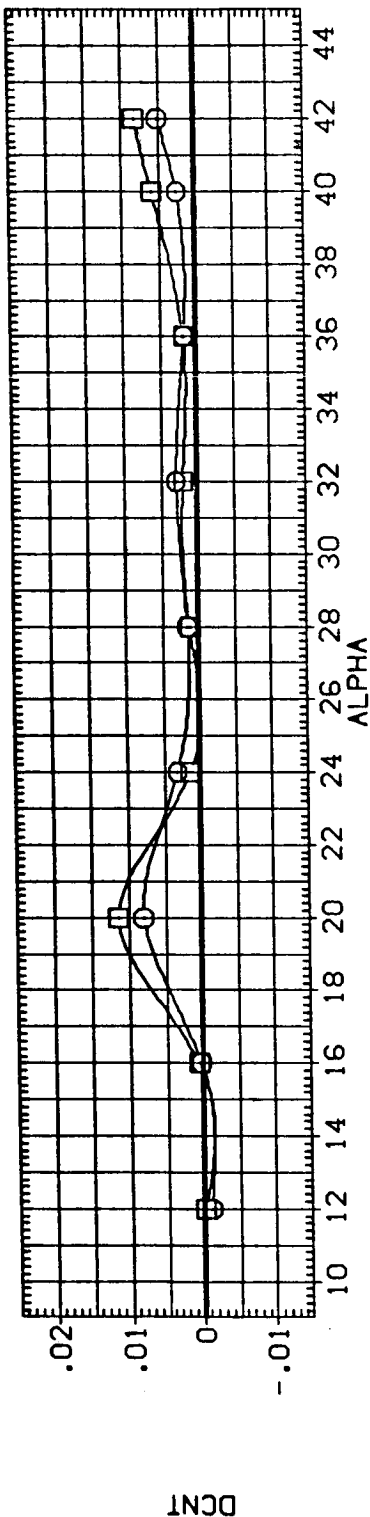


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30





DATA SET SYMBOL (ZE0011) (ZE0019) CONFIGURATION DESCRIPTION AMES 3.5-190 OA98 (011-M7+M14-N24) AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING) BETA .000 .000 ELEVON -40.000 -40.000 BOFLAP -11.700 -11.700 SPOBRK 55.000 55.000 REFERENCE INFORMATION SREF 2630.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP .0000 IN. ZMRP 375.0000 IN. SCALE .0150

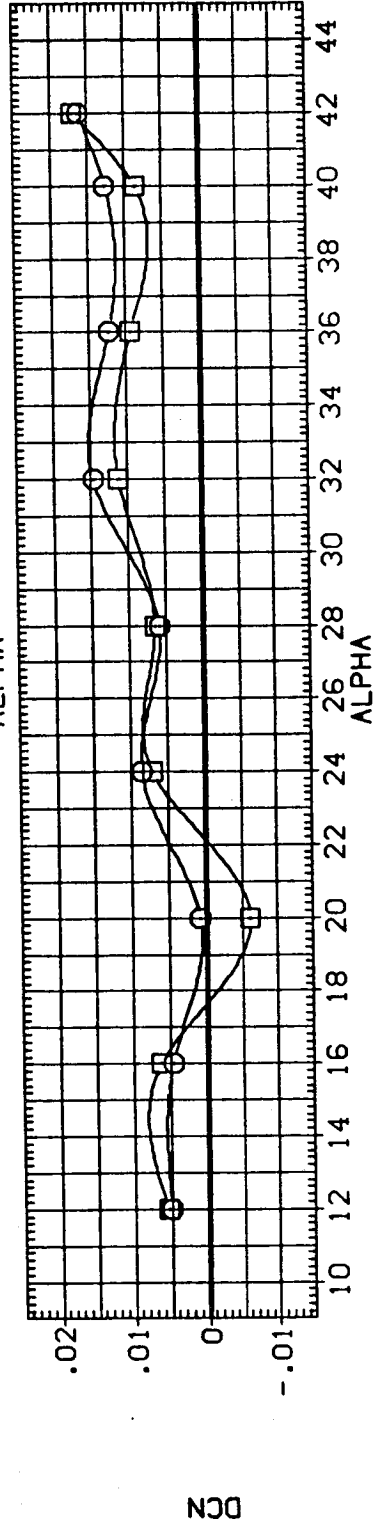
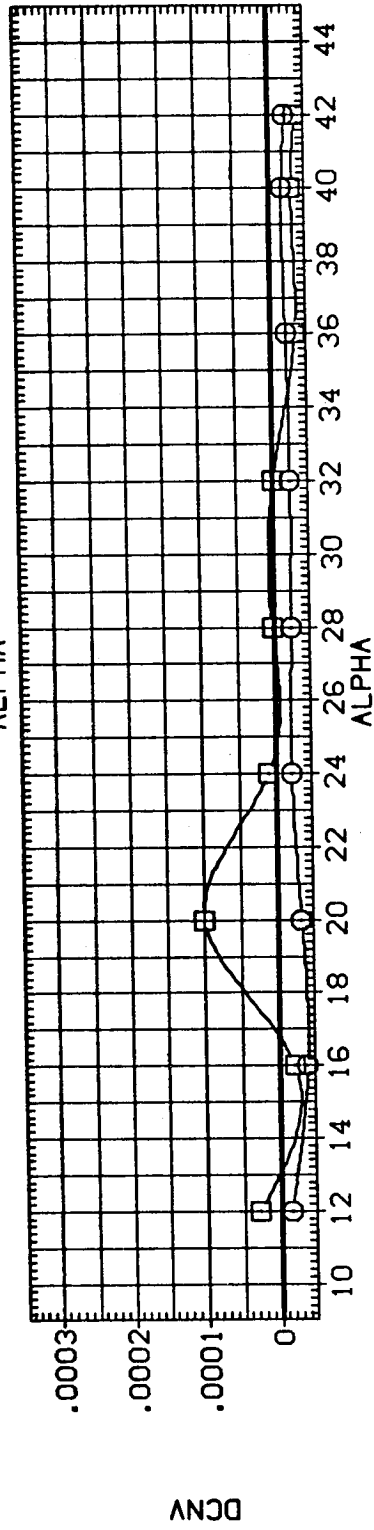
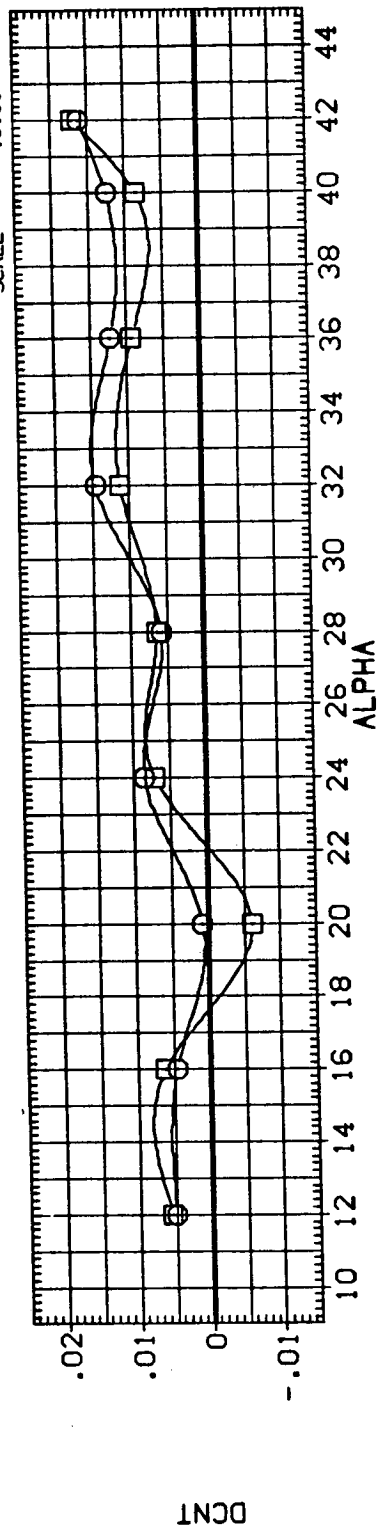


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(ZEG011)	AMES 3.5-190 OAS8 (011-17-M14-N24)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(ZEG019)	AMES 3.5-190 OAS8 (011-17-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LRP 474.8000 IN.
						BREF 936.8800 IN.
						XRFP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

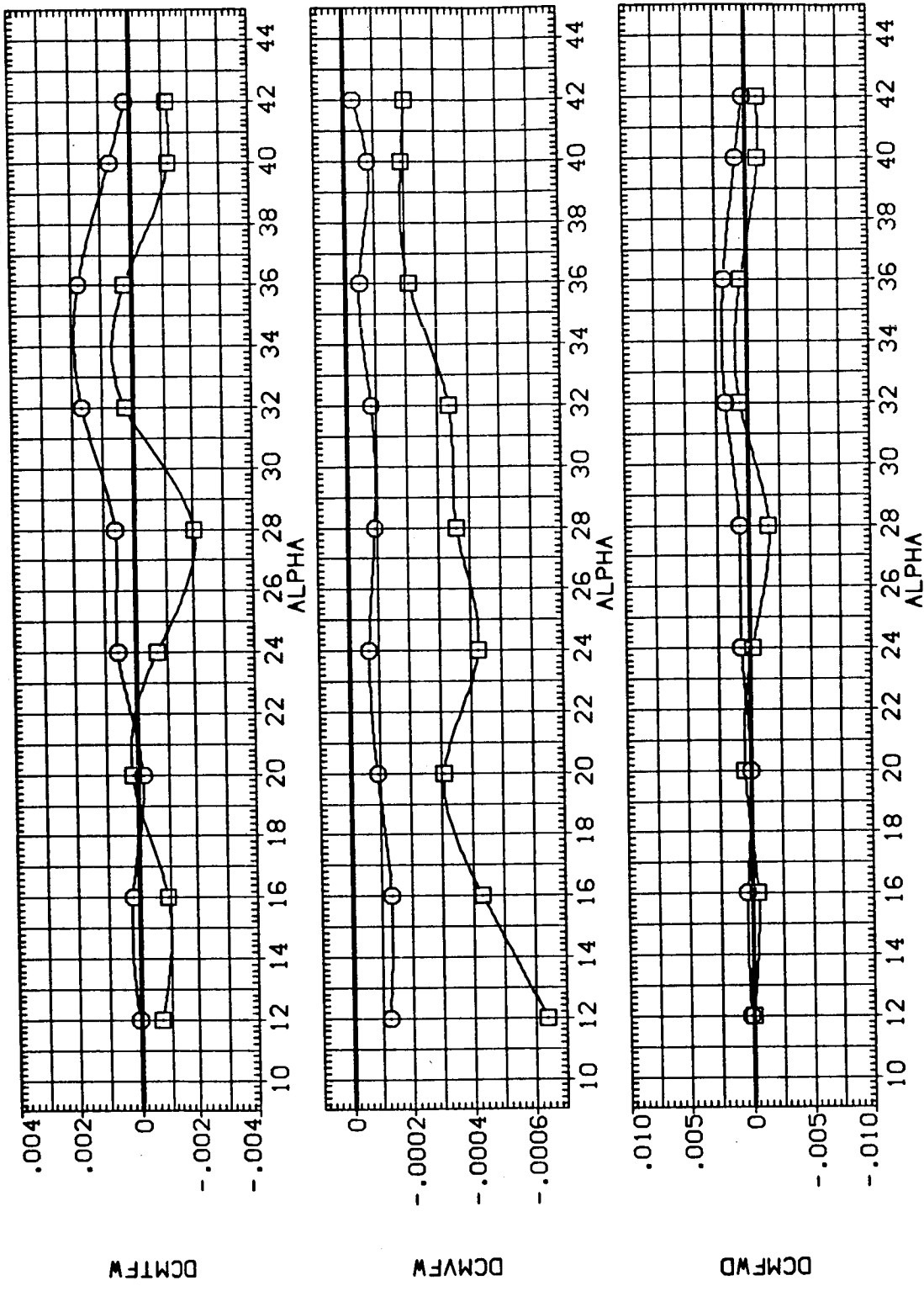


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

	REFERENCE	INFORMATION
SREF	2690.0000	50.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN.X0
YMRP	.0000	IN.Y0
ZMRP	375.0000	IN.Z0
SCALE	.0150	

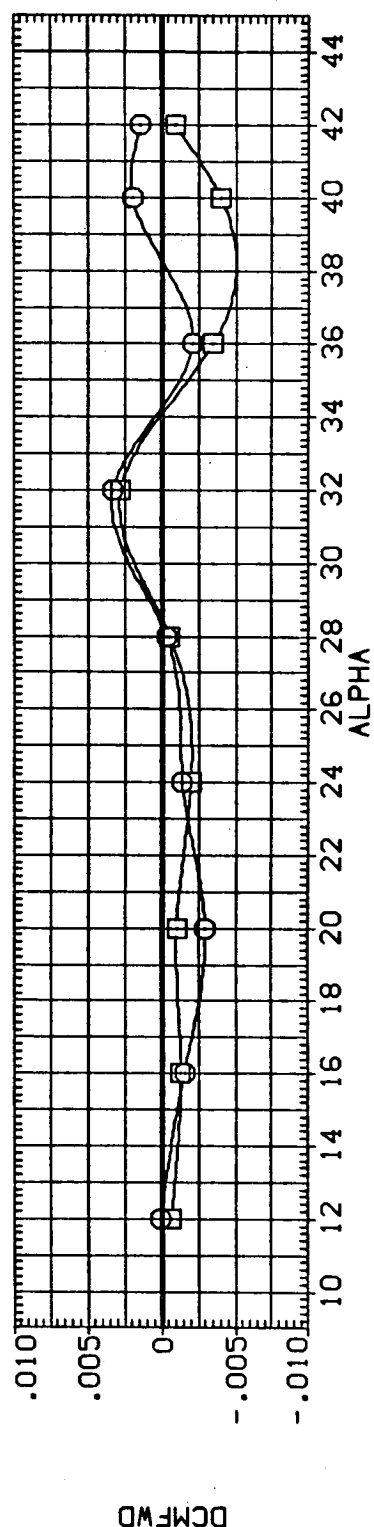
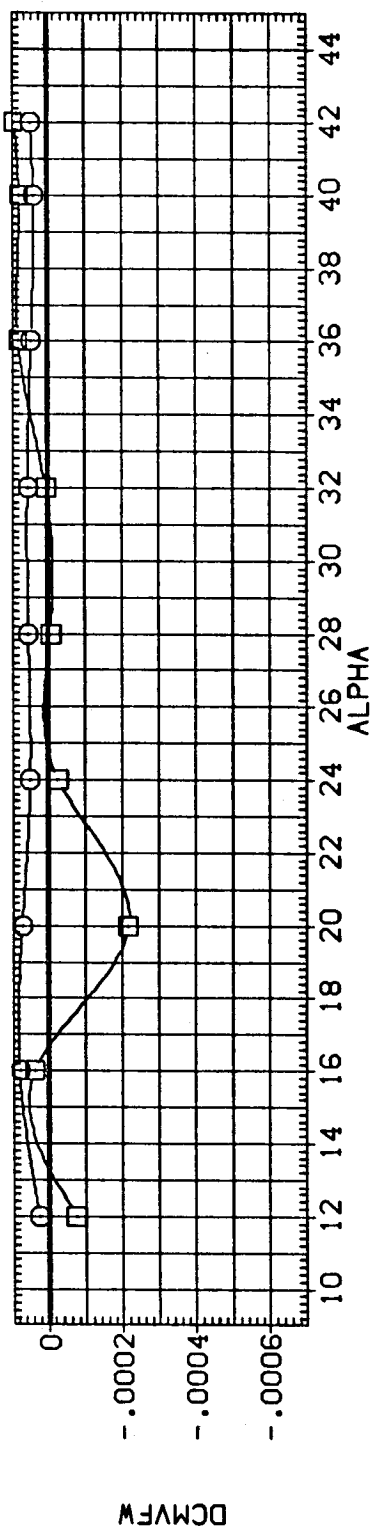
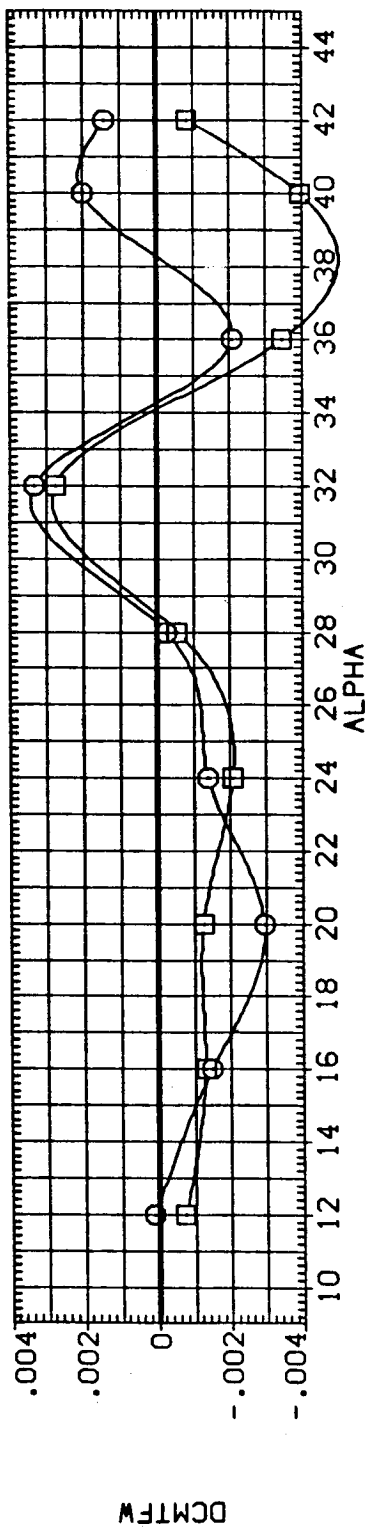


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(ZE0011)	AMES 3.5-190 GAS8 (011-47-414-N24)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(ZE0019)	AMES 3.5-190 GAS8 (011-47-414-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

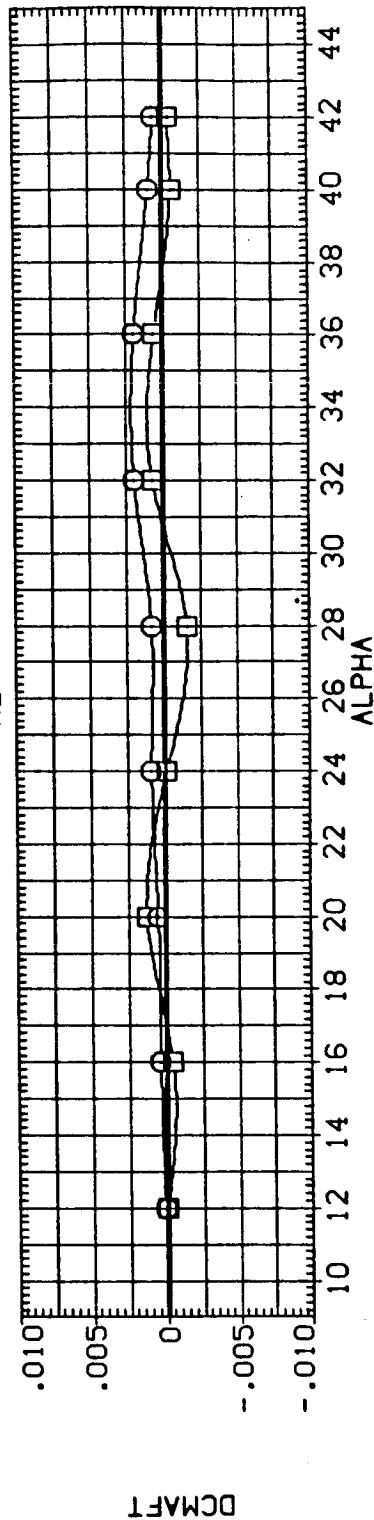
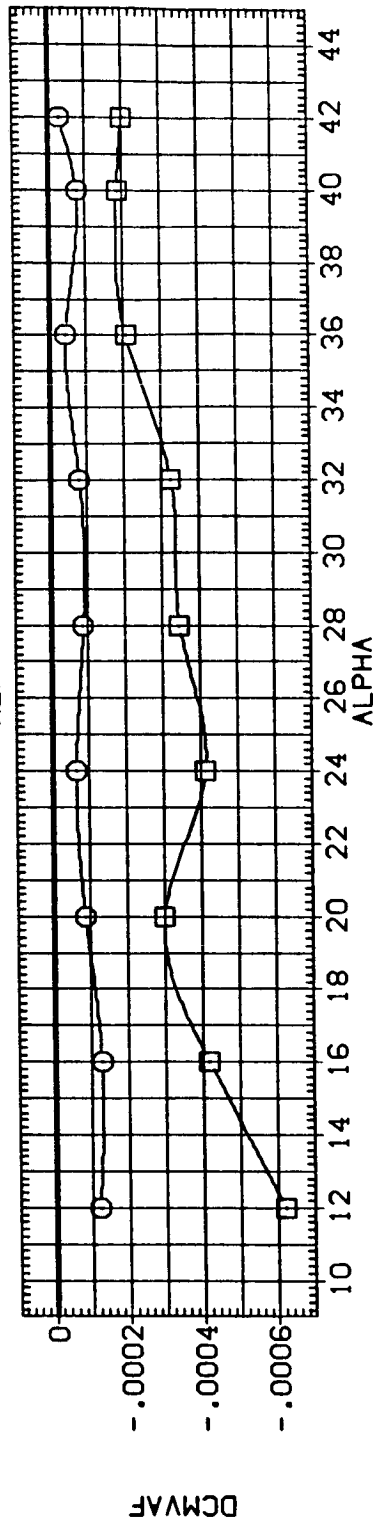
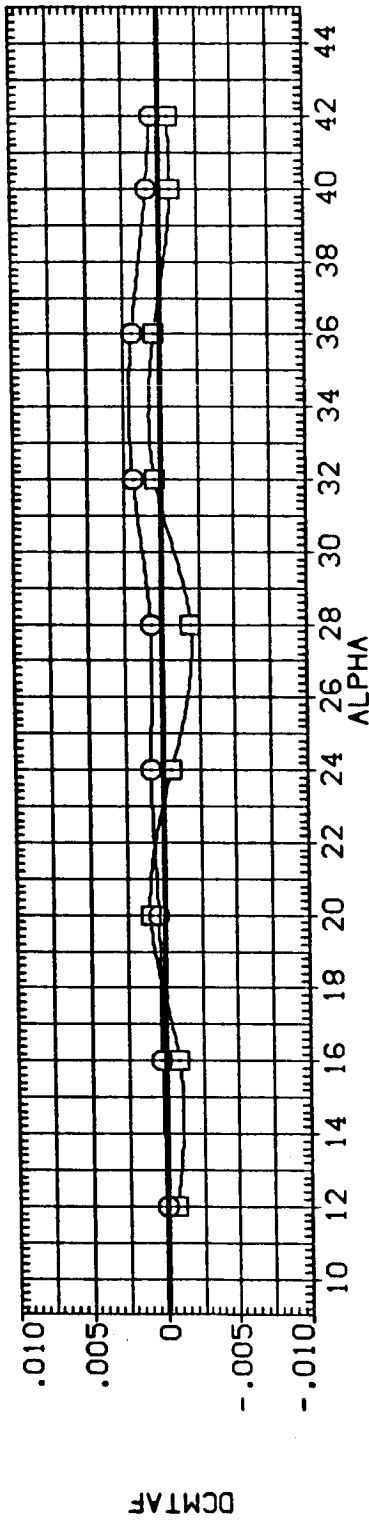


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	80FLAP	SPOBRK	REFERENCE INFORMATION
(ZE0011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(ZE0019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

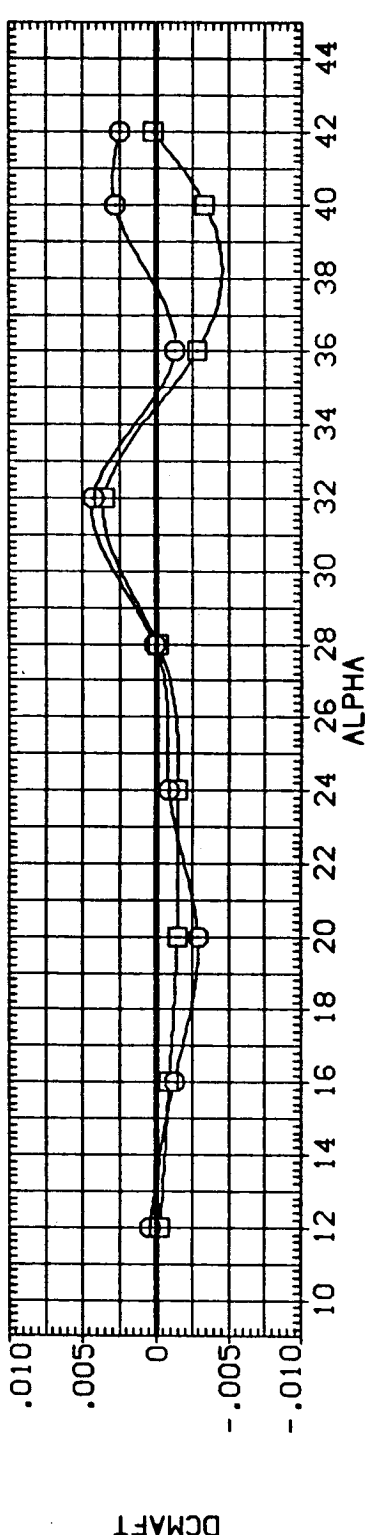
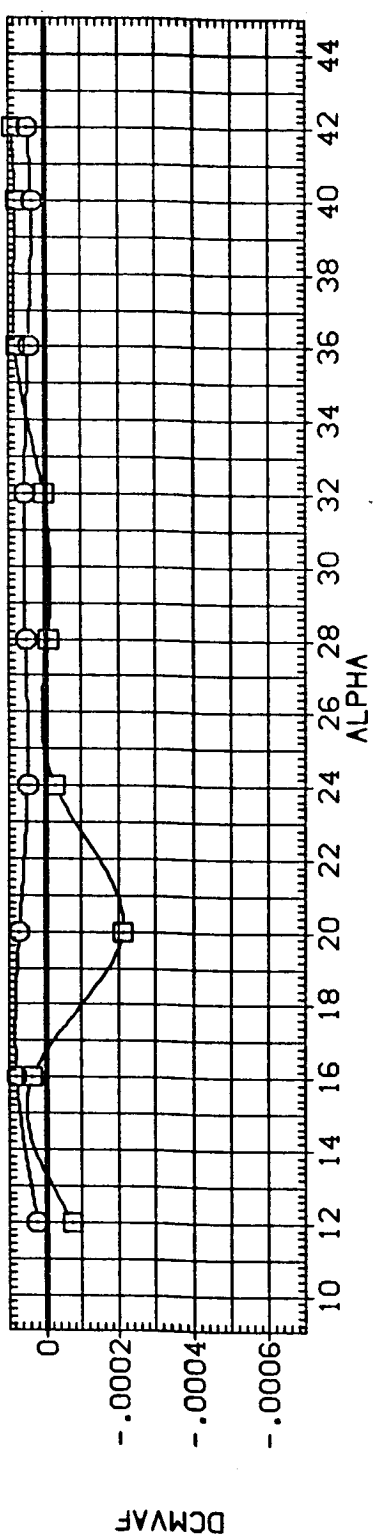
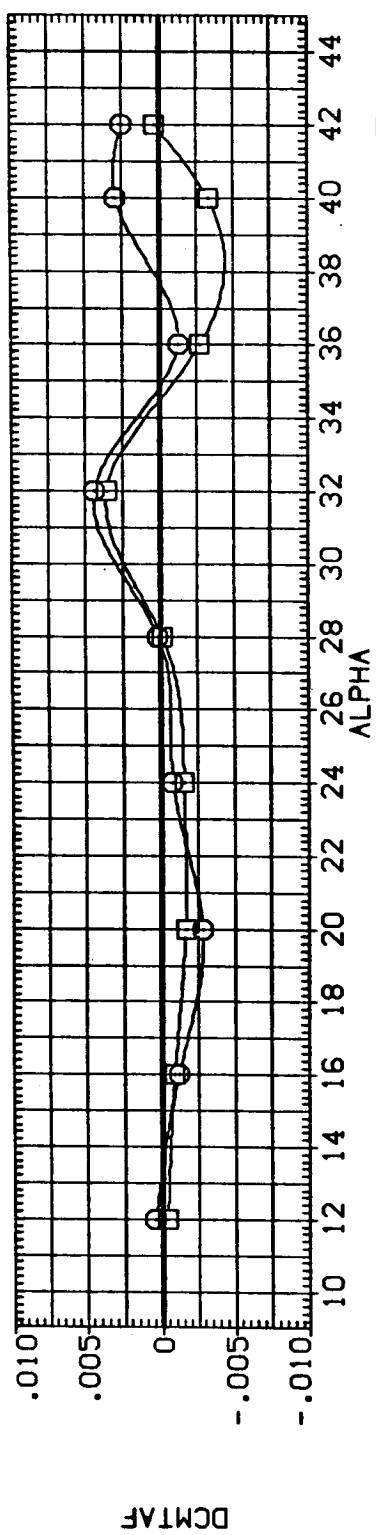


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(1EQ011)	AMES 3.5-190 OAS8 (011-47-M14-N24)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(1EQ019)	AMES 3.5-190 OAS8 (011-47-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0000 IN. Z0
						SCALE .0150

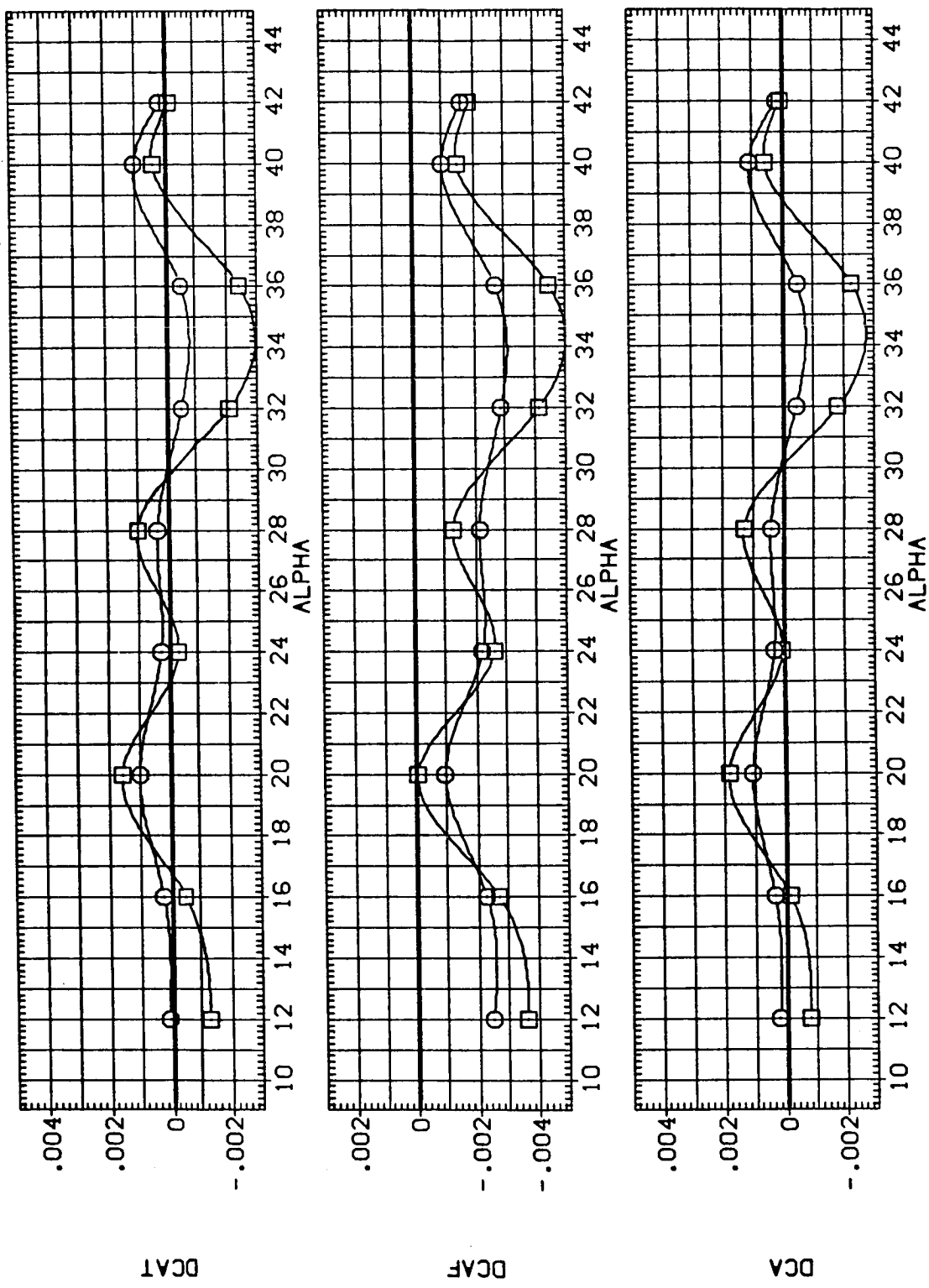


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL (1E0011) (1E0019) CONFIGURATION DESCRIPTION AMES 3.5-190 OA98 (011-M7-M14-N24) AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING) BETA .000 .000 ELEVON -40.000 -40.000 BOFLAP -11.700 -11.700 SPOBRK 55.000 55.000 REFERENCE INFORMATION SREF 2690.0000 50.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN.X0 YMRP .0000 IN.Y0 ZMRP 375.0000 IN.Z0 SCALE .0150

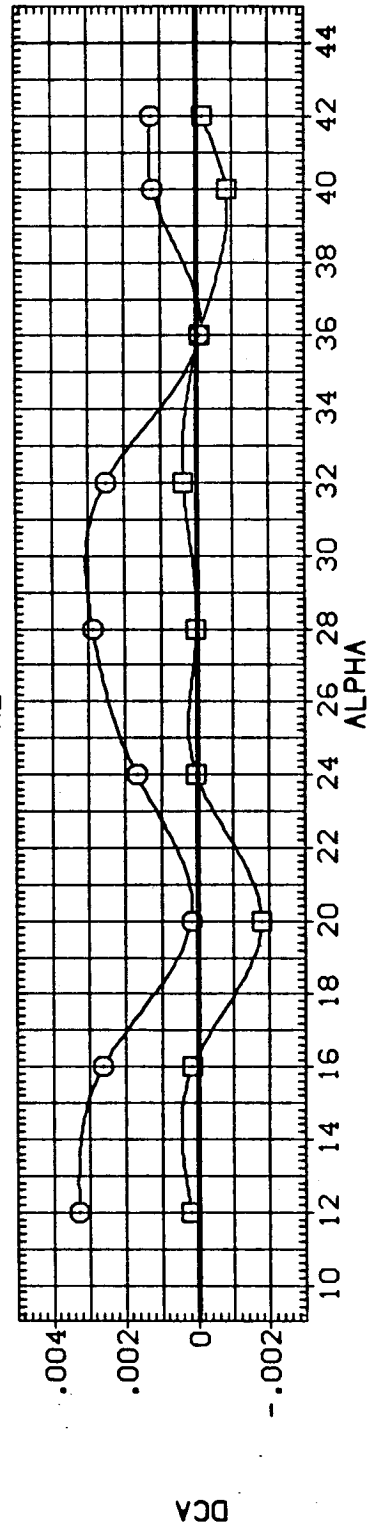
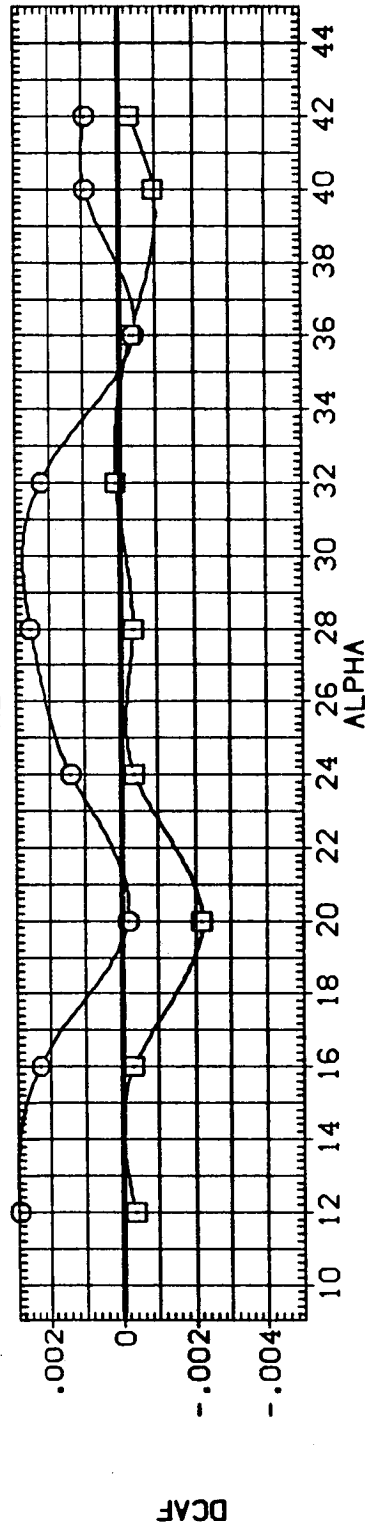
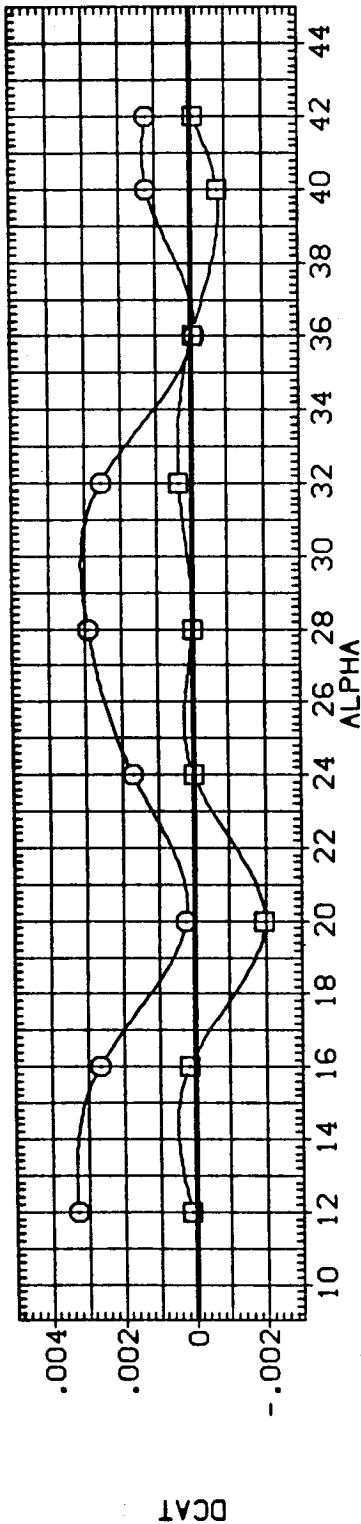


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(11EQ011)	AMES 3.5-190 OA98 (011-M7-H14-N24)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(11EQ019)	AMES 3.5-190 OA98 (011-M7-H14-N24+DJMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.5800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

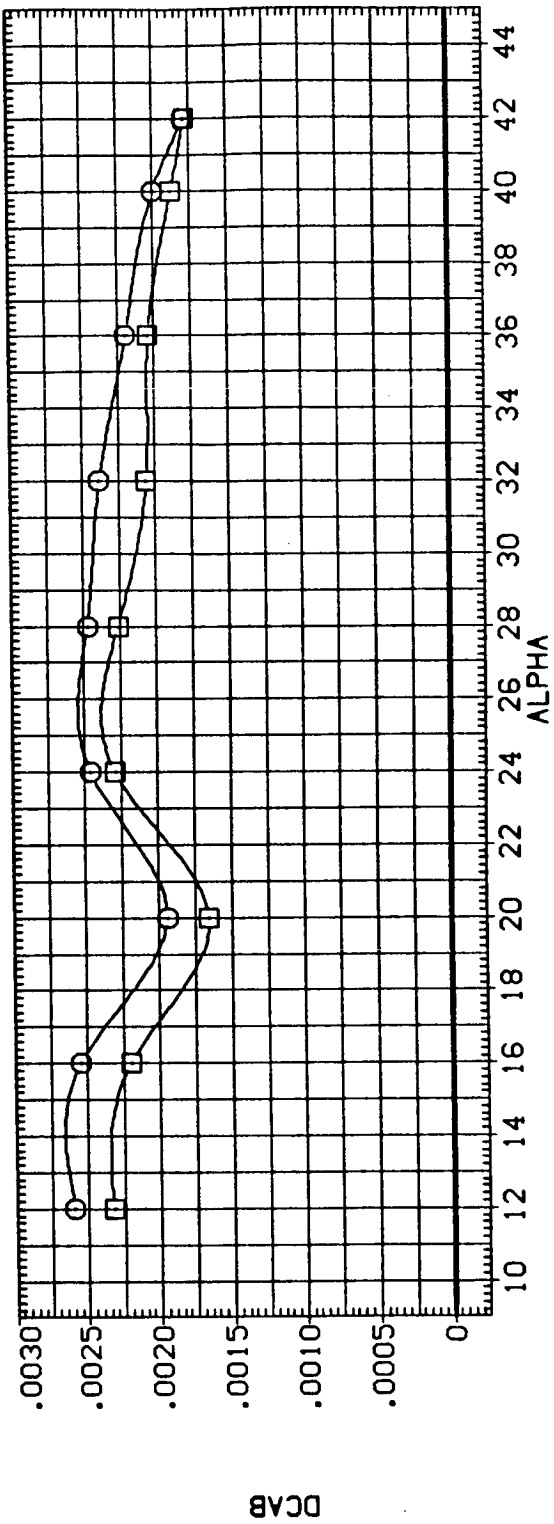
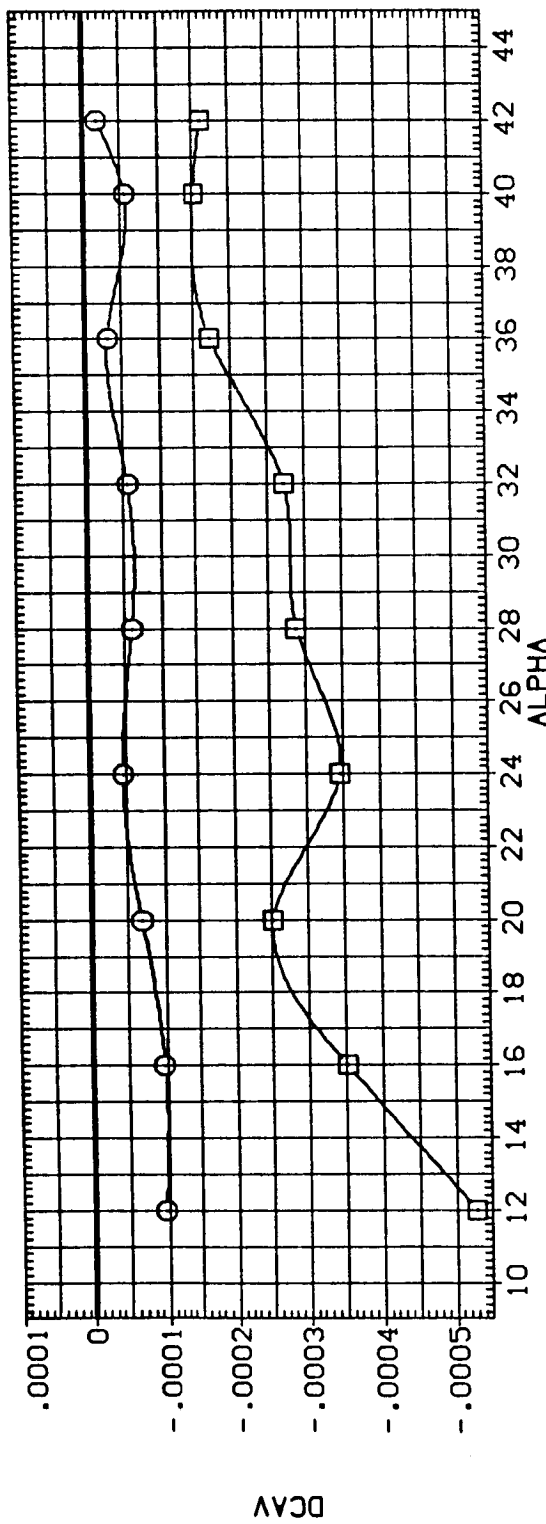


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30





DATA SET SYMBOL CONFIGURATION DESCRIPTION BETA ELEVON BOFLAP SPDBRK SREF LREF BREF XMRP YMRP ZMRP SCALE

(1EQ011) APES 3.5-190 0A98 (011-M7+M14-N24) .000 -40.000 -11.700 55.000 2690.0000 SQ.FT.

(1EQ019) APES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) .000 -40.000 -11.700 55.000 474.8000 IN.

936.6800 IN.

1076.7000 IN.XG

.0000 IN.YG

375.0000 IN.ZG

.0150

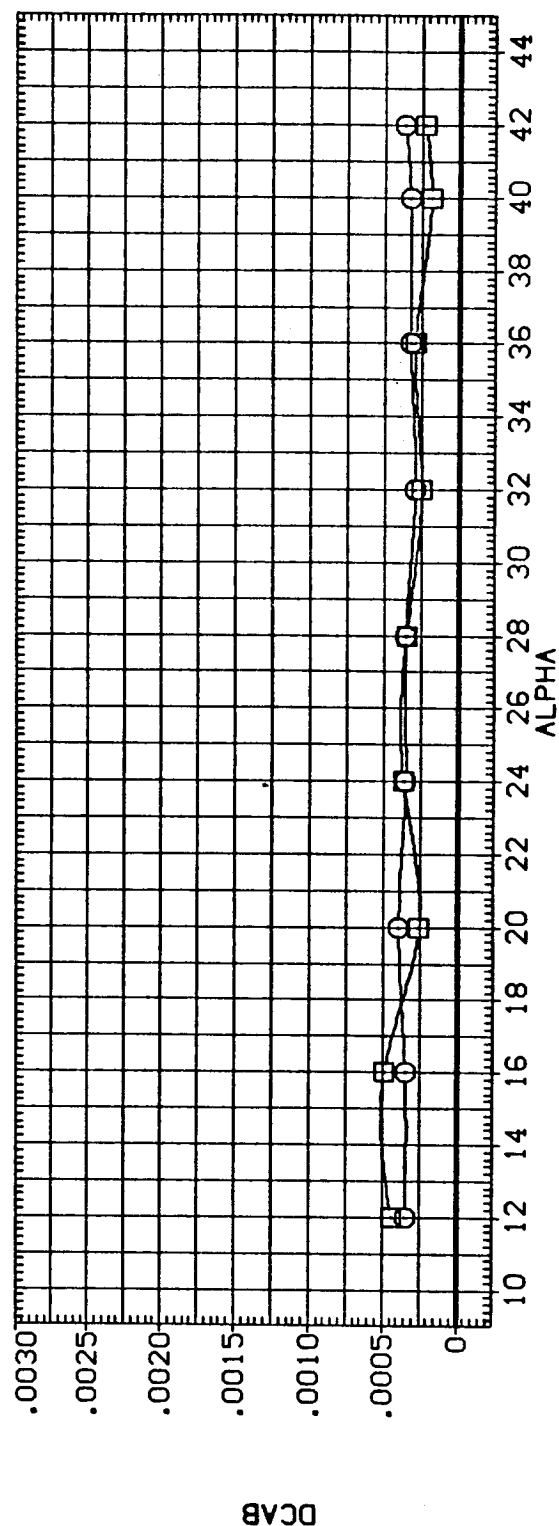
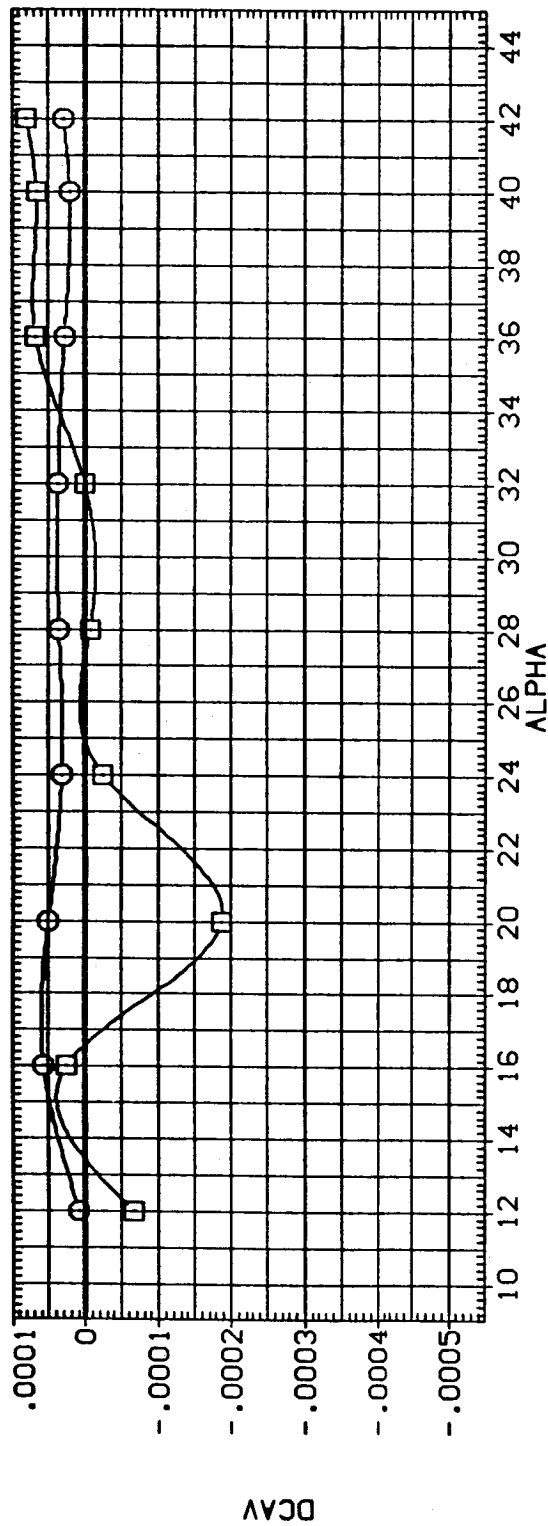


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B) MACH = 10.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(YED011)	AMES 3.5-190 0A98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(YED019)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

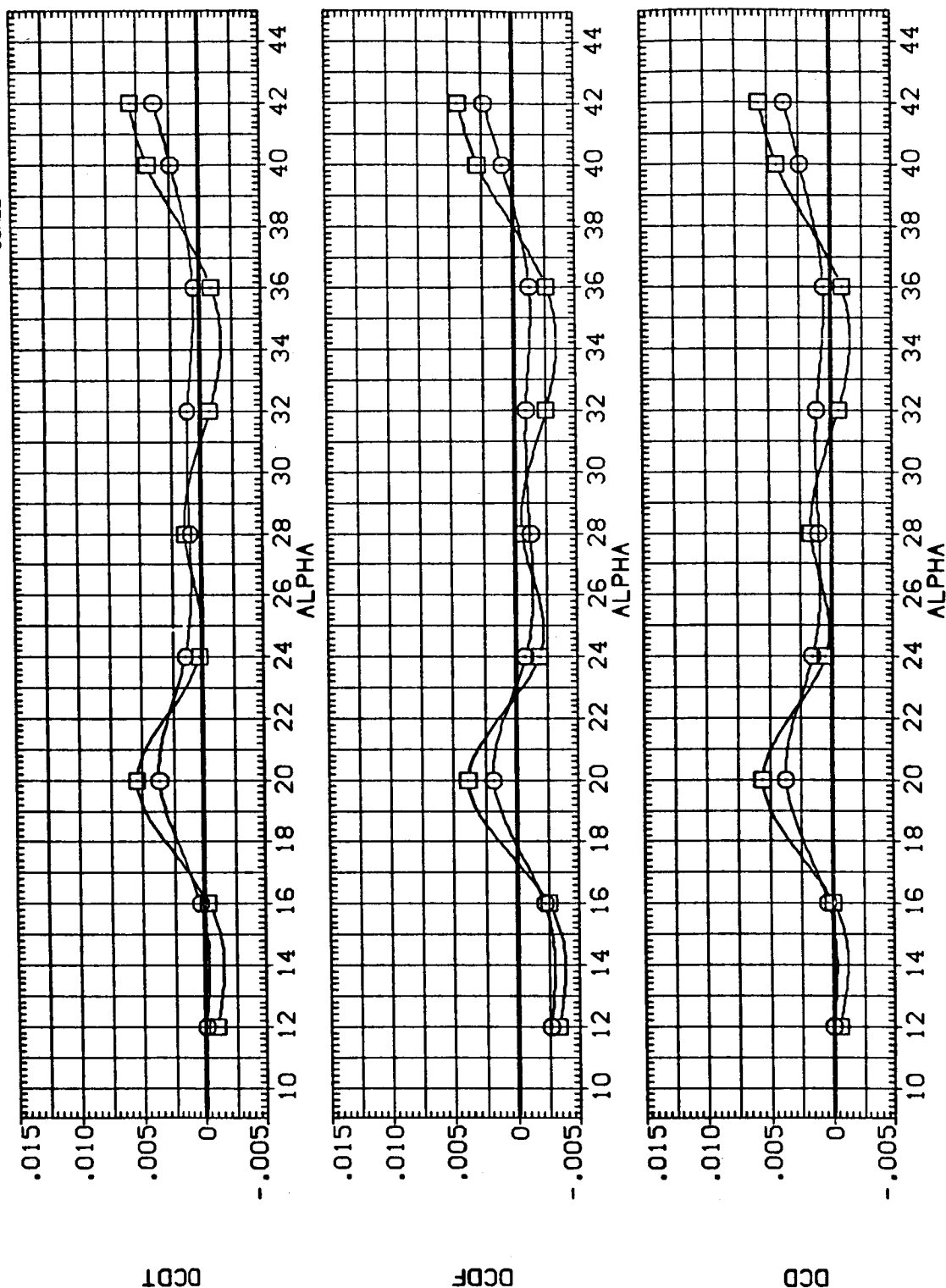


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(YE0011)	AMES 3.5-190 OA98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(YE0019)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

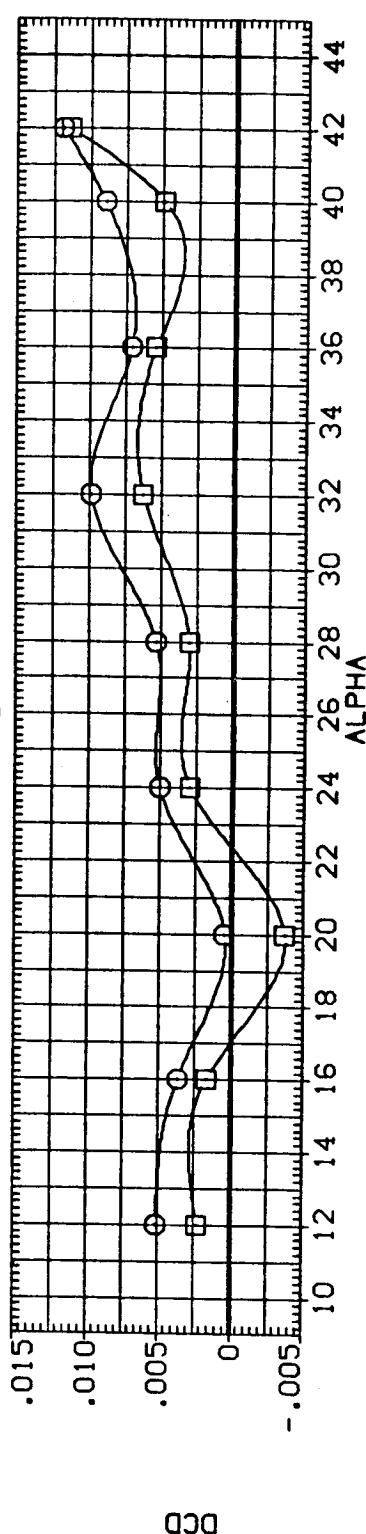
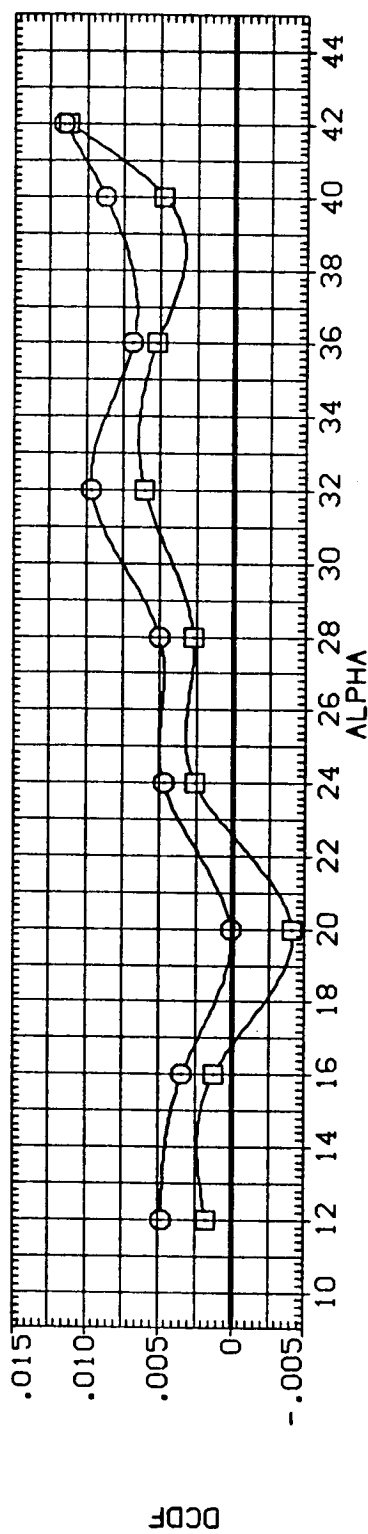
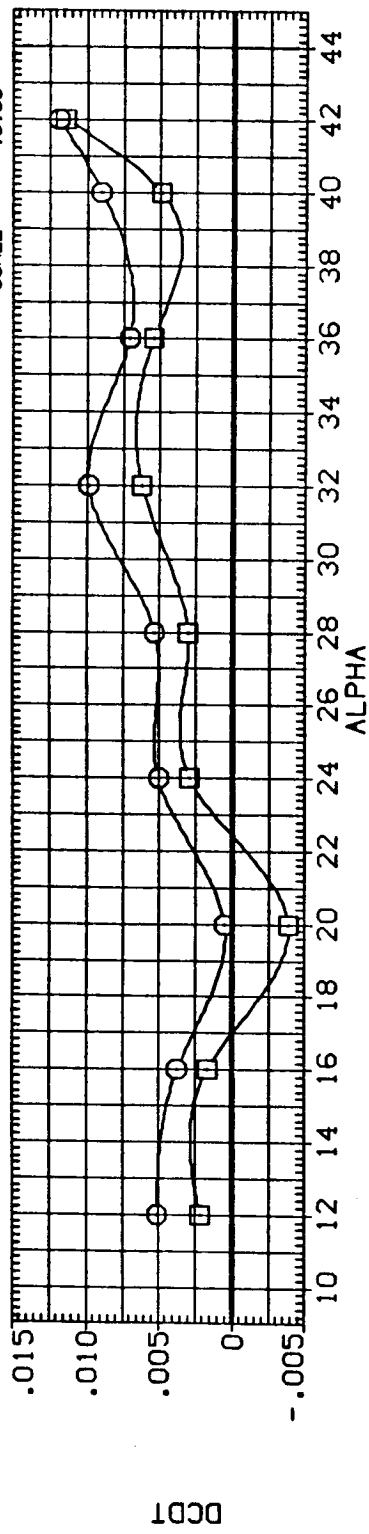


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.30

DATA SET SYMBOL  
(YEG011)  
(YEG019)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-M7+M14-N24)  
AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
-40.000  
-40.000

BOFLAP  
-11.700  
-11.700

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

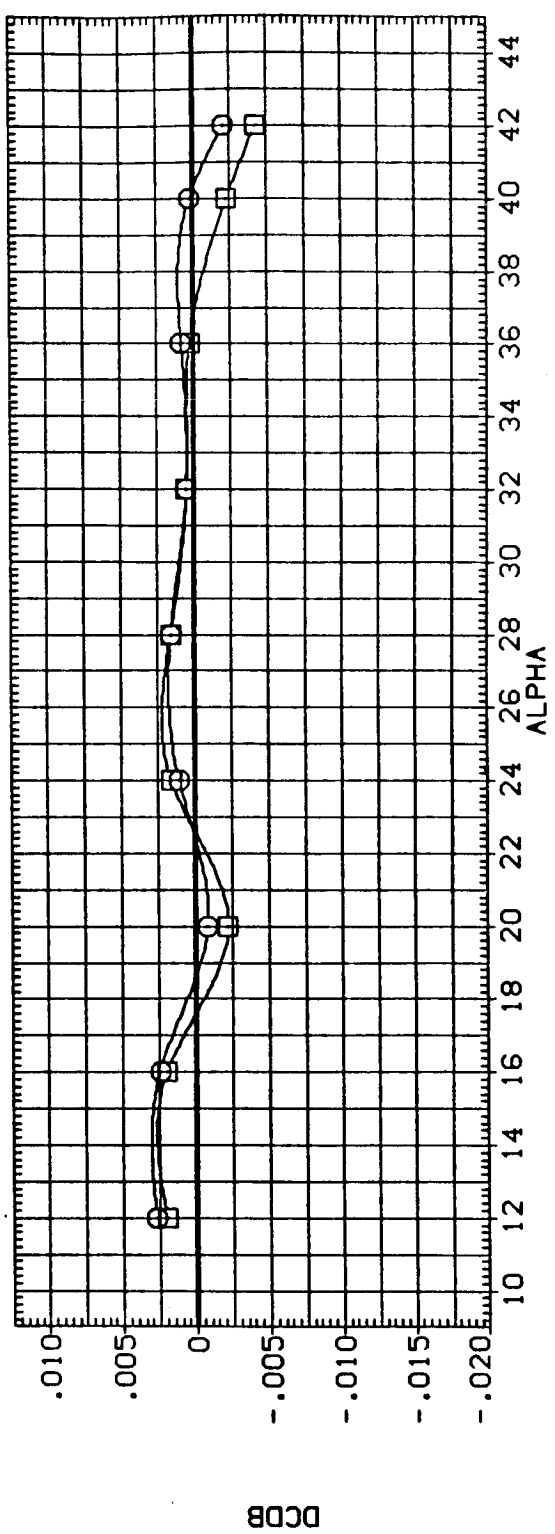
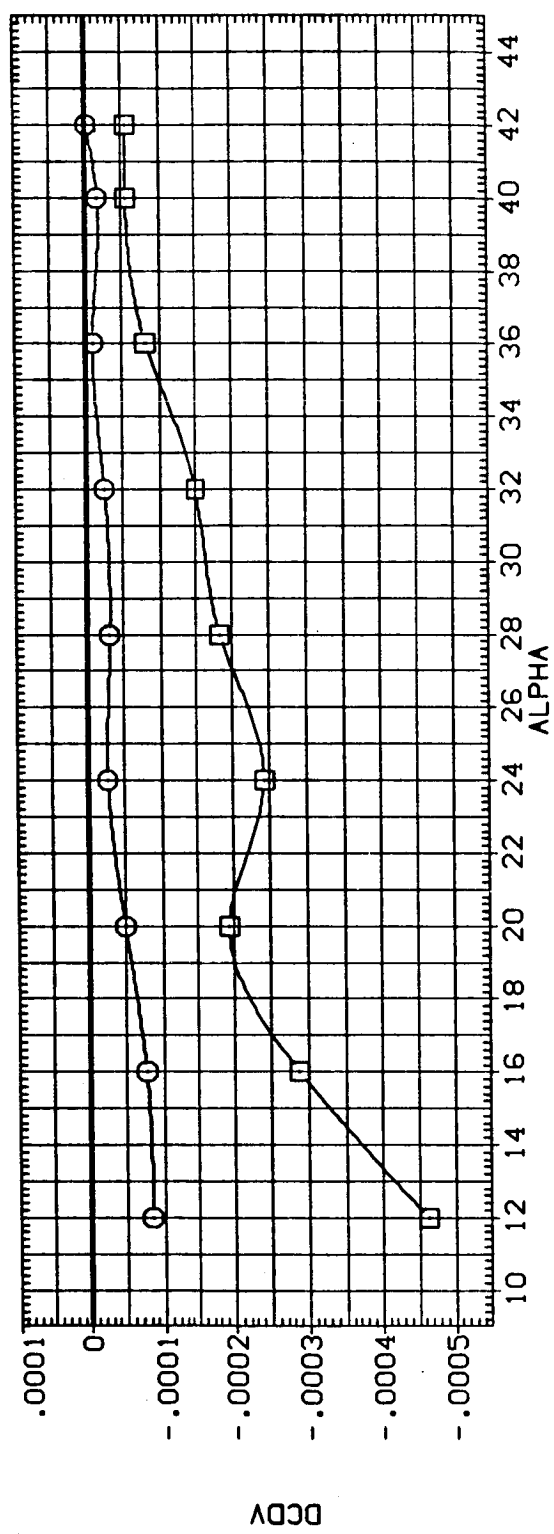


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.30





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AEG003)	AMES 3.5-190 0A98 (011-M7-M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AEG011)	AMES 3.5-190 0A98 (011-M7-M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(AEG019)	AMES 3.5-190 0A98 (011-M7-M14-N24+JUNNY STING)	.000	-40.000	-11.700	55.000	BREF 936.8800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

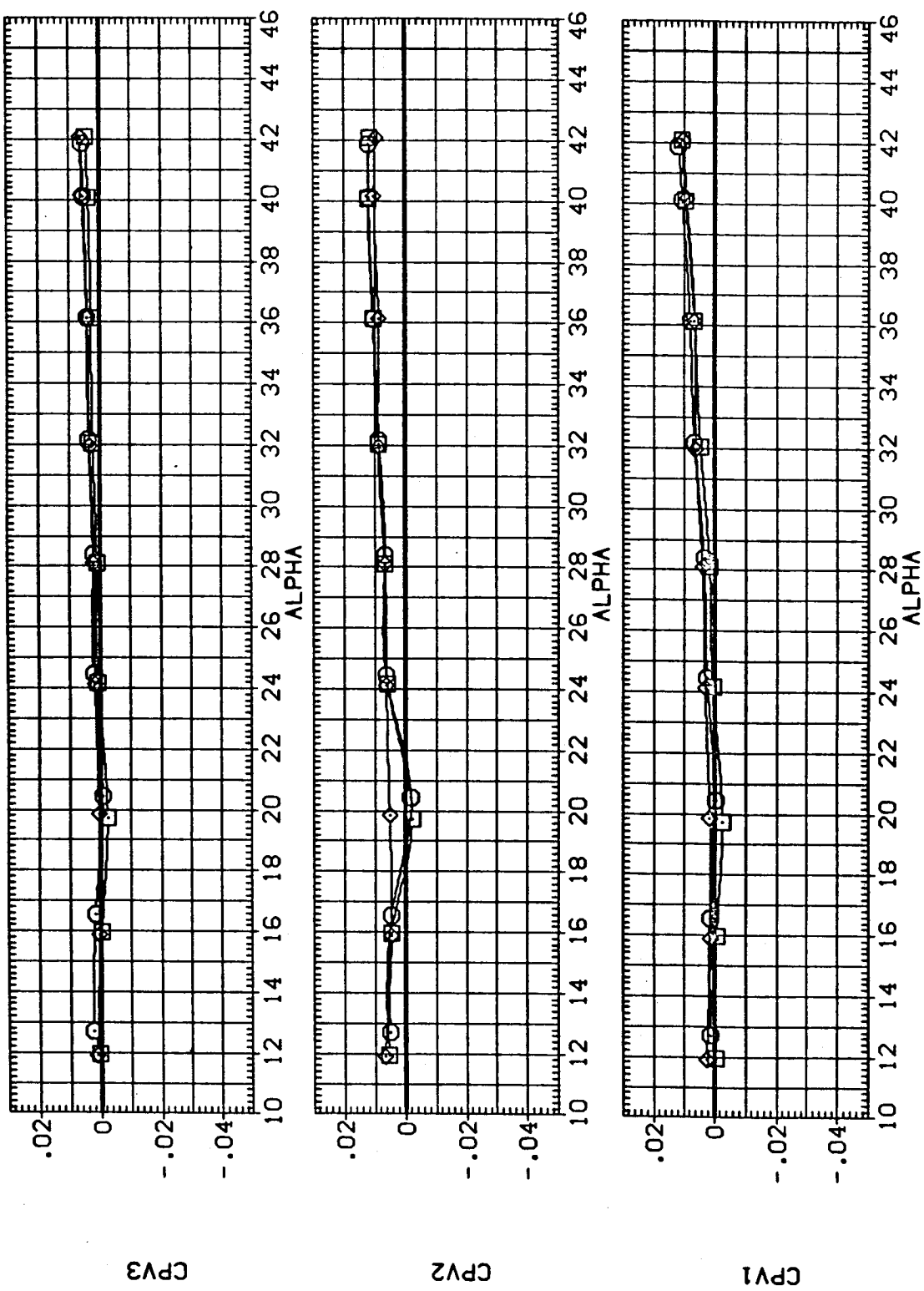


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(B)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AEO003)	AMES 3.5-190 OA98 (011-M7+M14)	.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AEO011)	AMES 3.5-190 OA98 (011-M7+M14-N24)	.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(AEO019)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

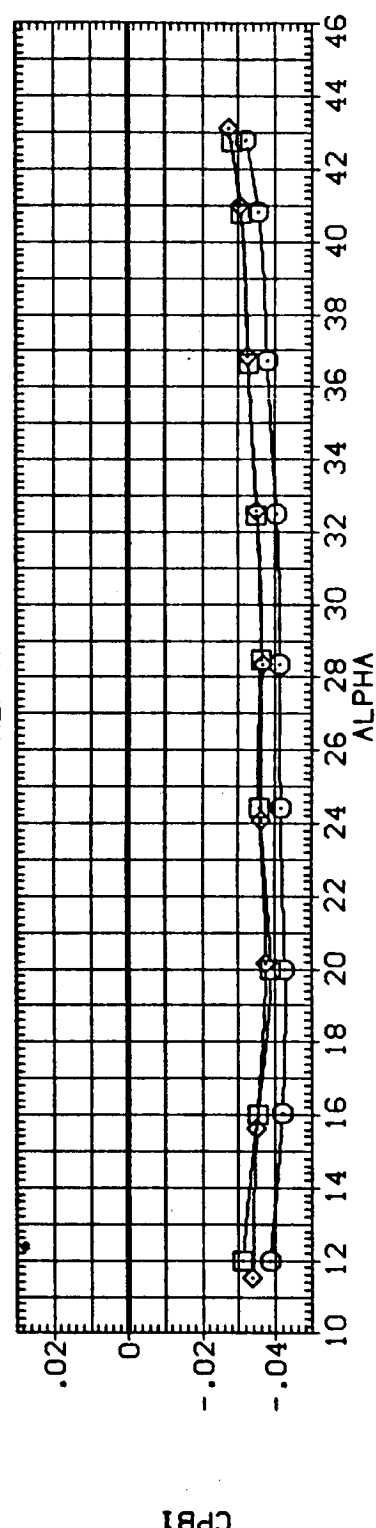
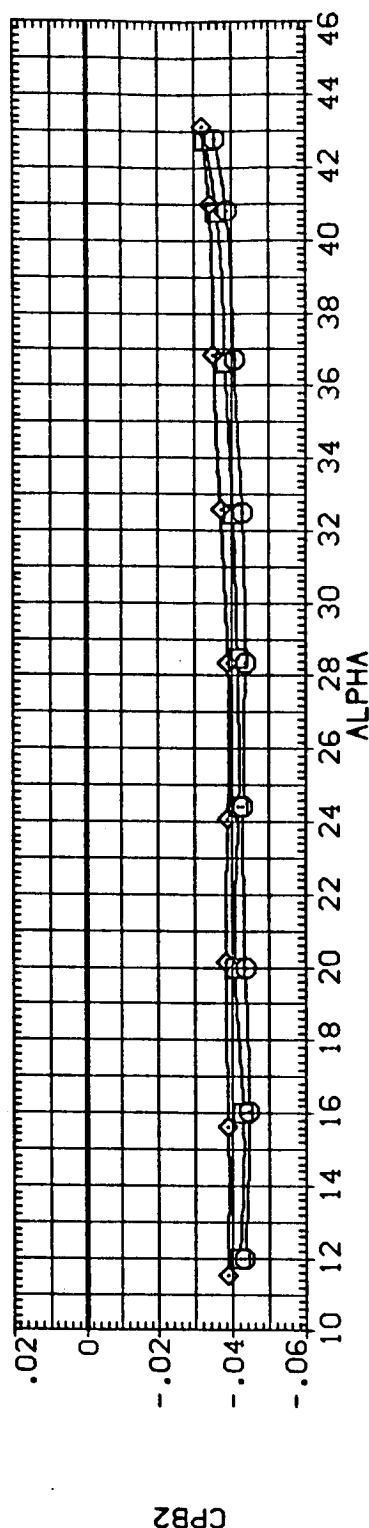
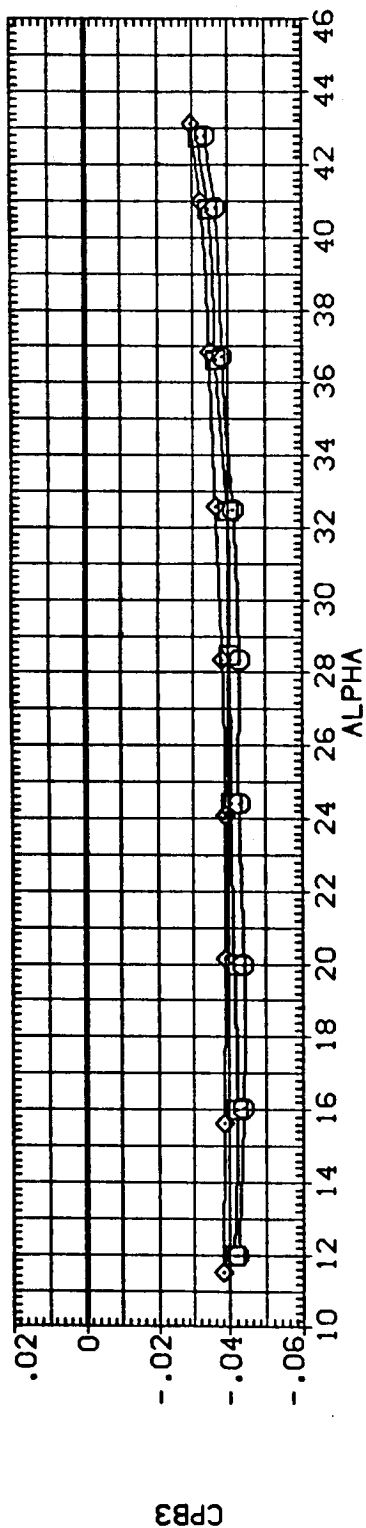


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0004)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(CE0020)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

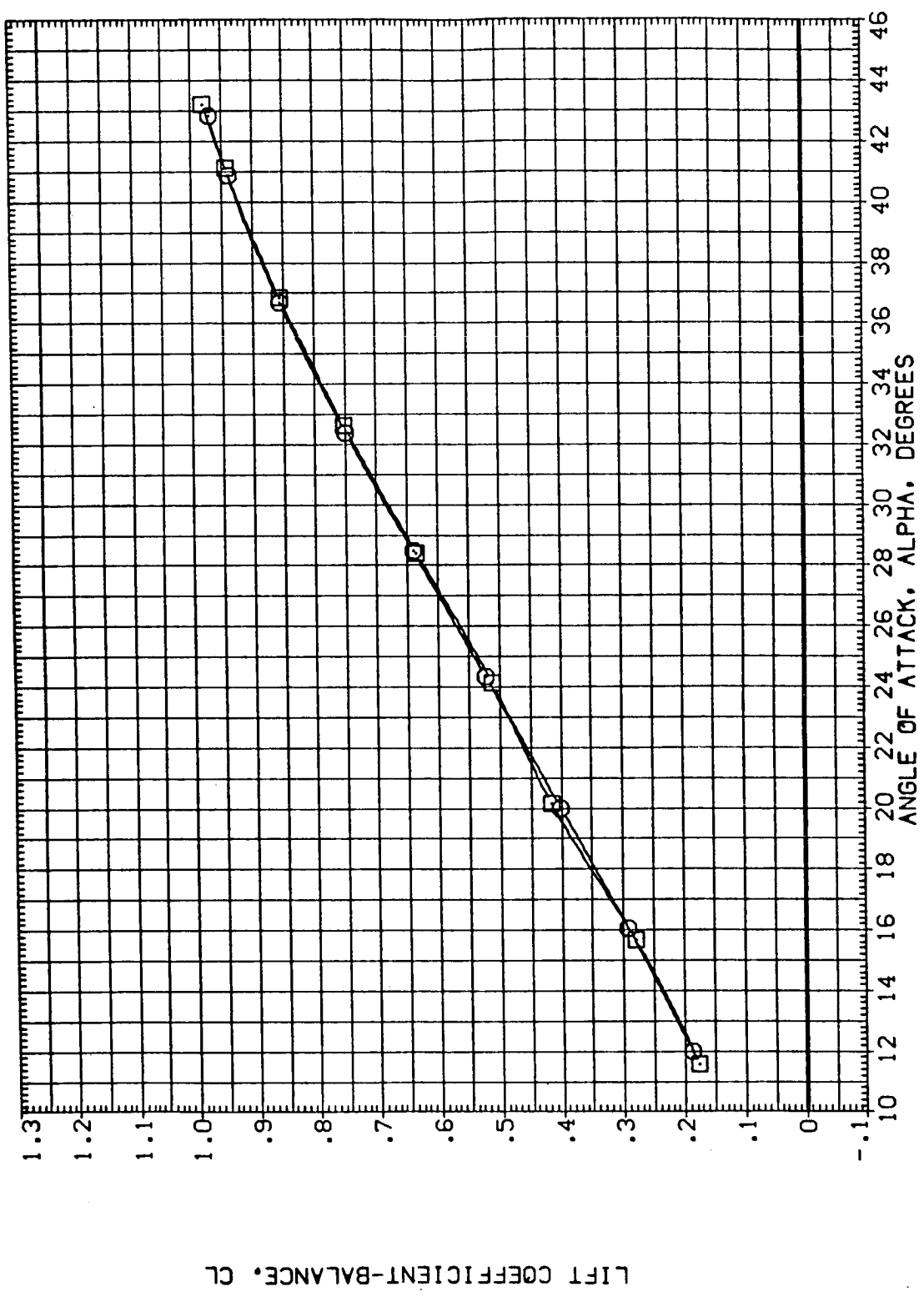


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDF LAP	SPDBRK	REFERENCE INFORMATION
(CE0004)	AMES 3.5-190 OA98 (011-M7+M14)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(CE0020)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

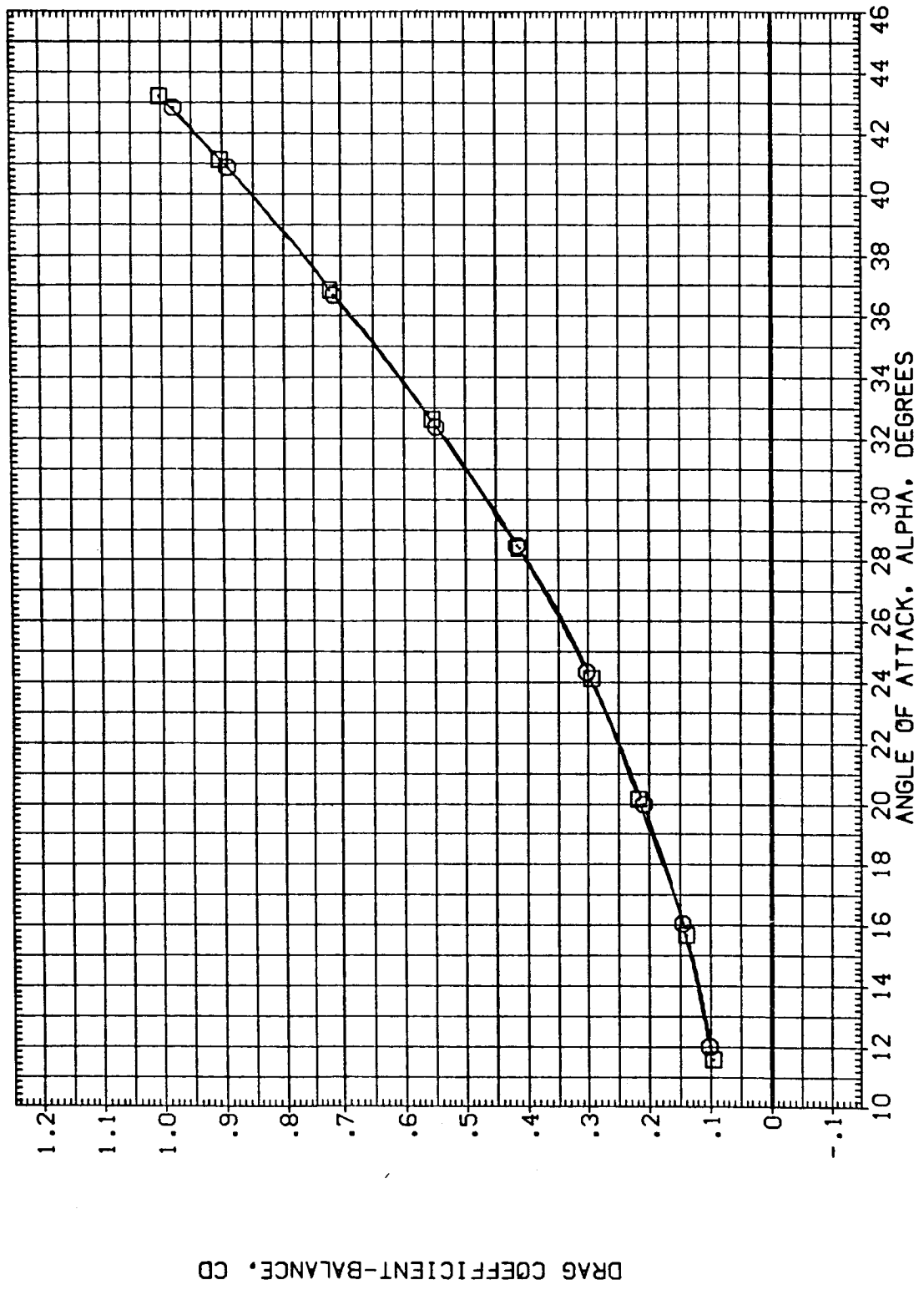


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0004)	AMES 3.5-190 0A98 (011-17+M14)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(CE0020)	AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

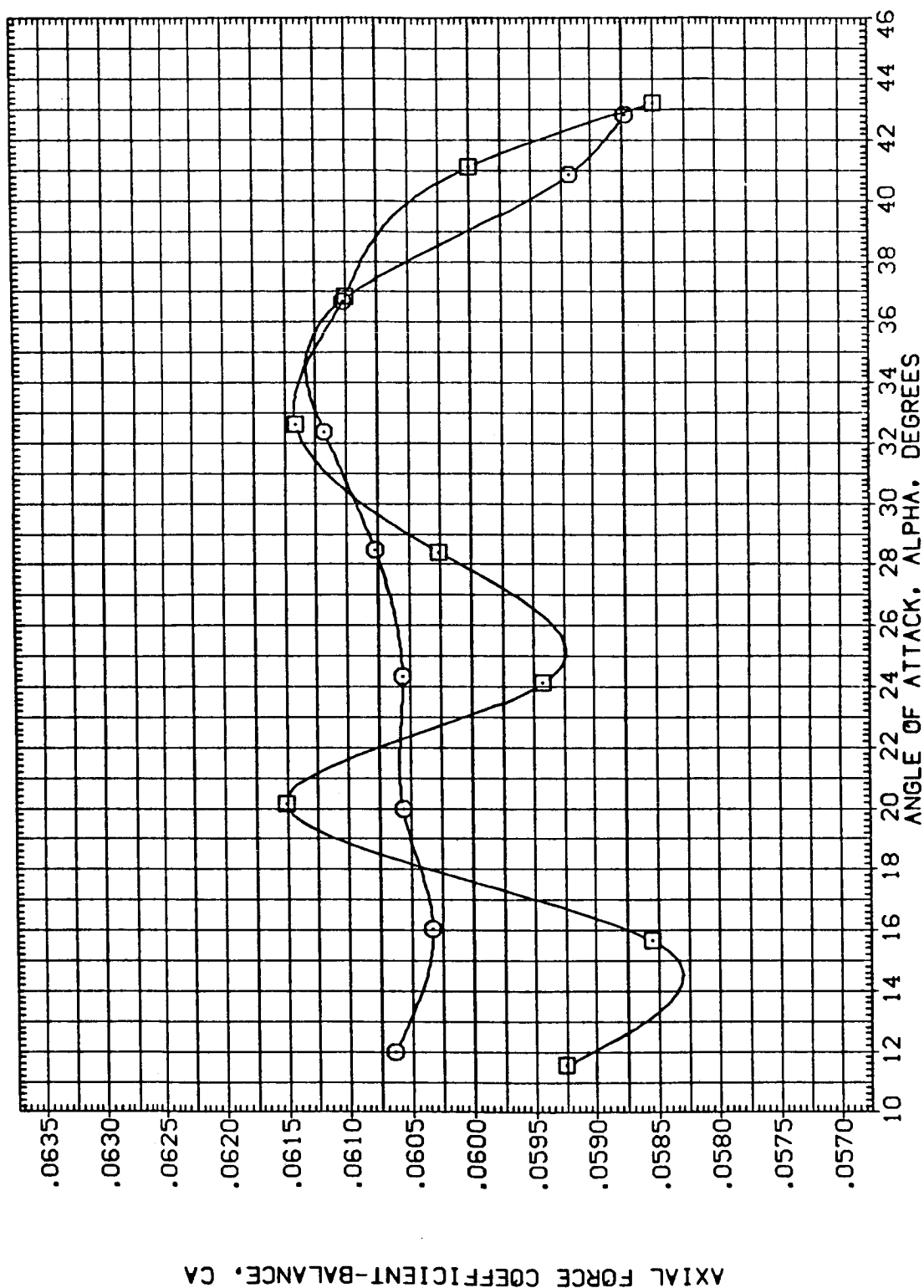


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL      CONFIGURATION DESCRIPTION  
 (CE0004)      AMES 3.5-190 0A98 (011-M7+M14)  
 (CE0020)      AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA      ELEVON      BOFLAP      SPOBRK  
 .000      .000      -11.700      85.000  
 .000      .000      -11.700      85.000

REFERENCE INFORMATION  
 SREF      2690.0000      SQ.FT.  
 LREF      474.8000      IN.  
 BREF      936.6800      IN.  
 XMRP      1076.7000      IN.X0  
 YMRP      .0000      IN.Y0  
 ZMRP      375.0000      IN.Z0  
 SCALE      .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

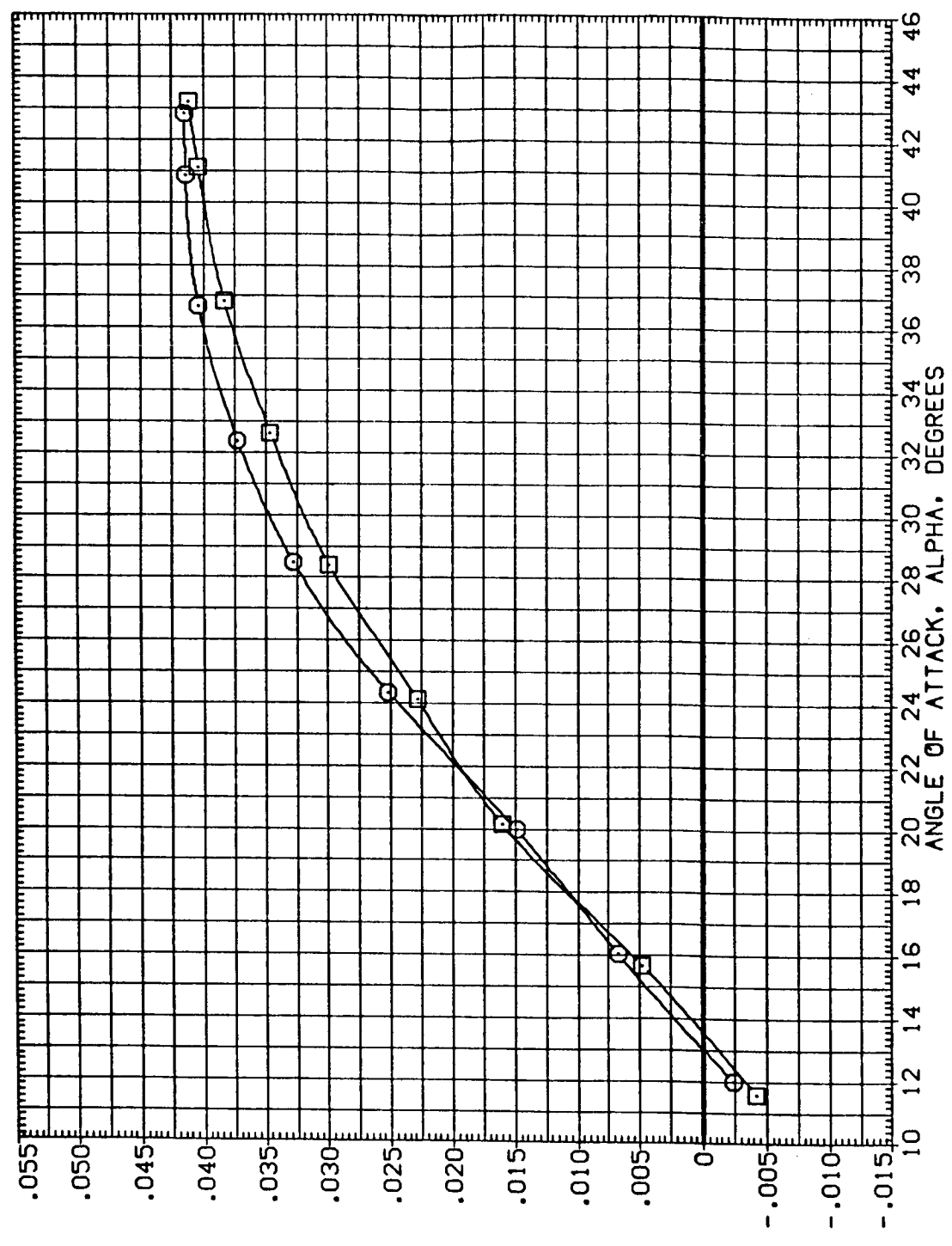


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0004)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(CE0020)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

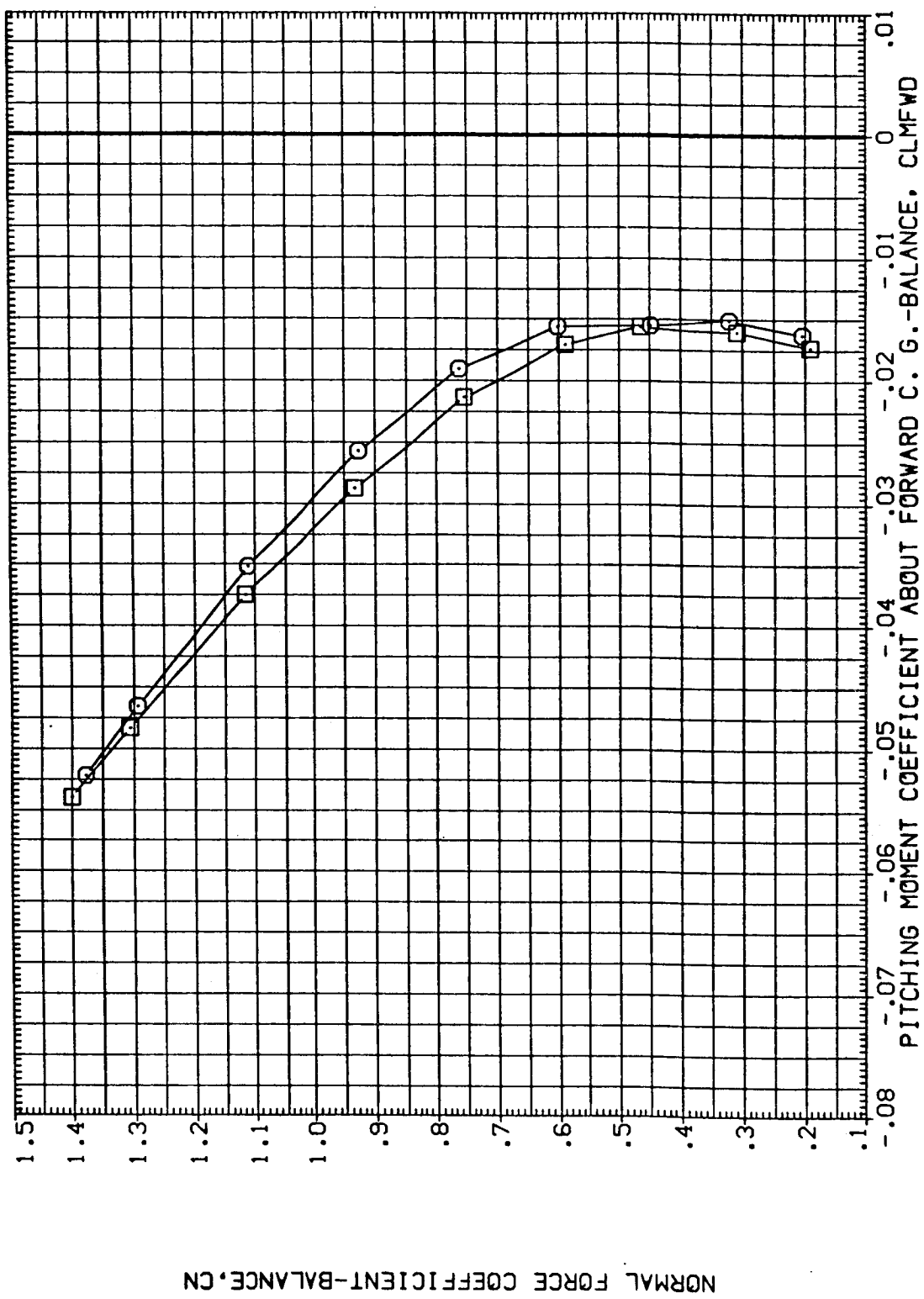


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0004)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(CE0020)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

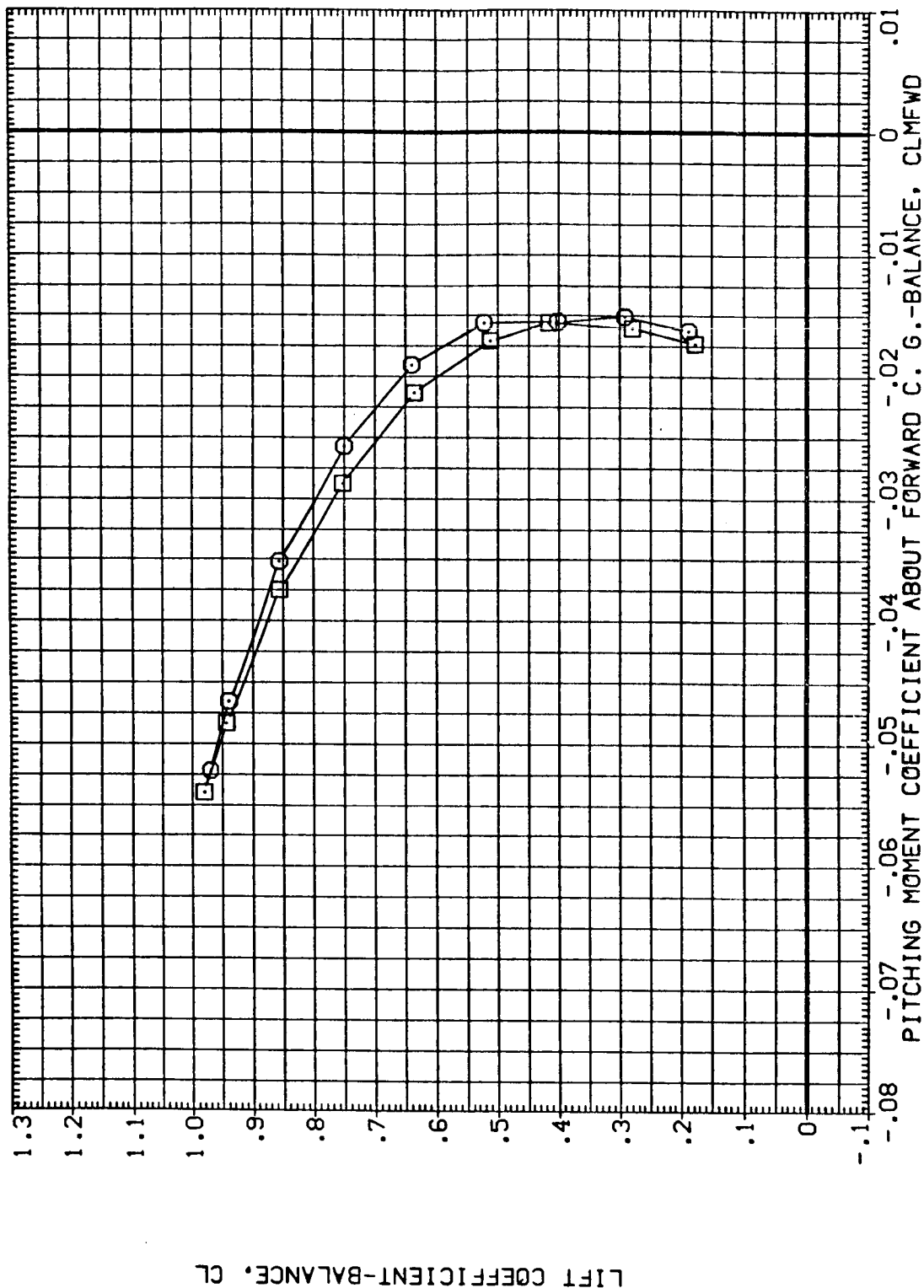


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0004)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(CE0020)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

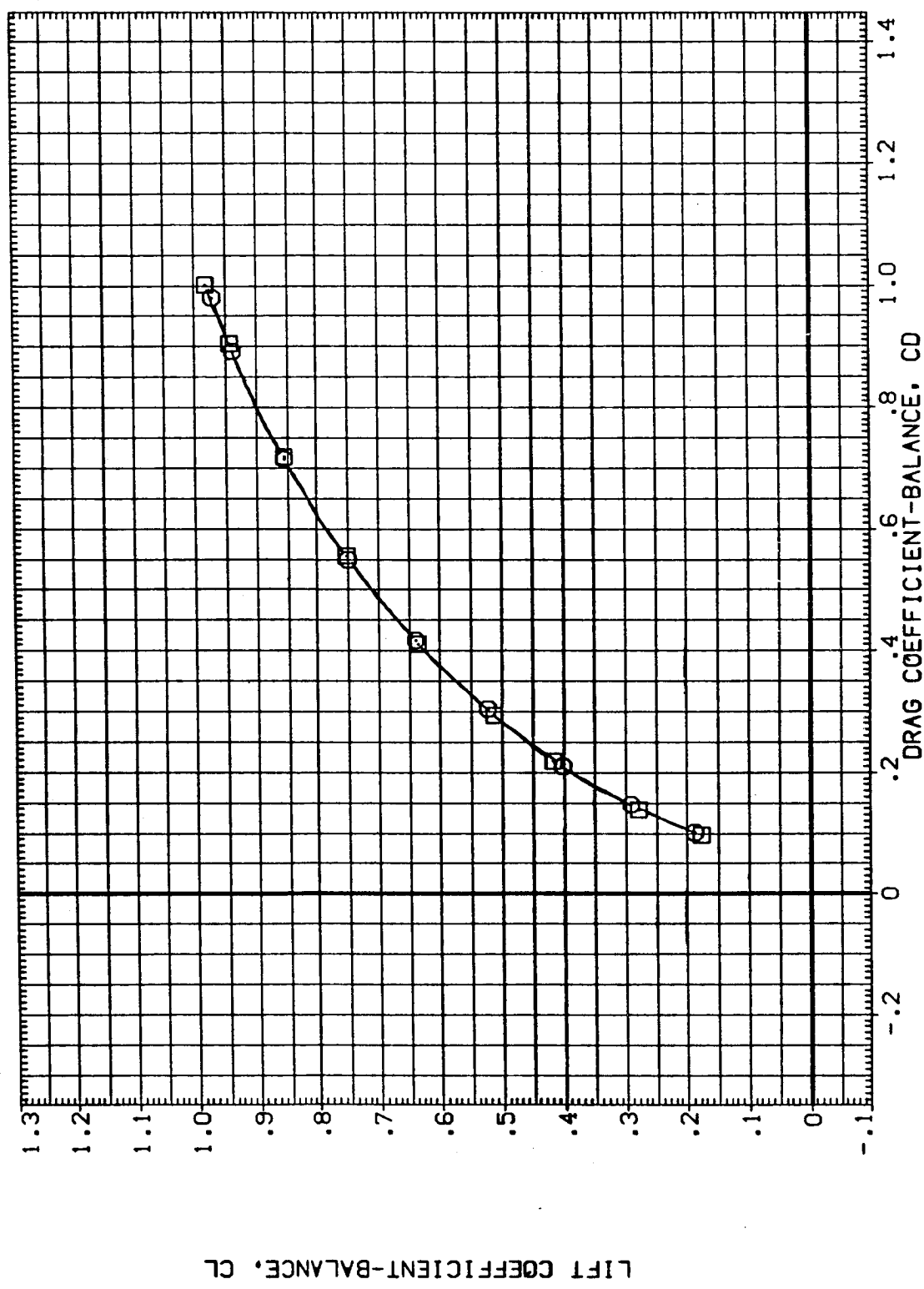


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL  
(EE0004)  
(EE0020)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 D498 (011-M7-M14)  
AMES 3.5-190 D498 (011-M7-M14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPDRK  
85.000  
85.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

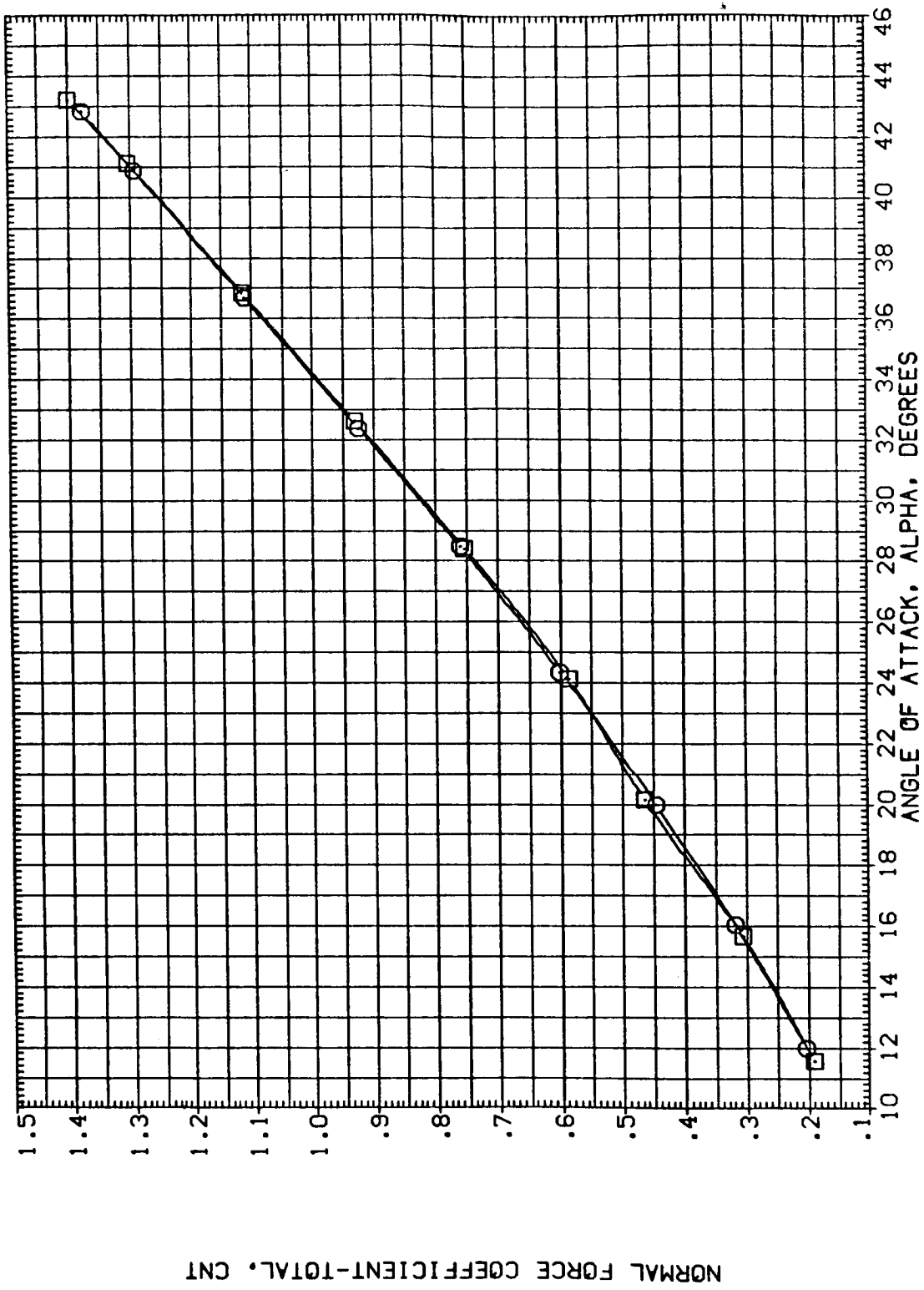


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 5.25

DATA SET SYMBOL (EE0004)   
 (EE0020)   
 CONFIGURATION DESCRIPTION AMES 3.5-190 OAS8 (011-47+H14)   
 AMES 3.5-190 OAS8 (011-47+H14-N24+DUMMY STING)   
 BETA .000   
 ELEVON .000   
 BOFLAP -11.700   
 SPOBRK 85.000   
 85.000   
 REFERENCE INFORMATION   
 SREF 2690.0000   
 LREF 474.8000   
 BREF 936.6800   
 XMRP 1076.7000   
 YMRP .0000   
 ZMRP 375.0000   
 IN.X0 IN.Y0 IN.Z0   
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

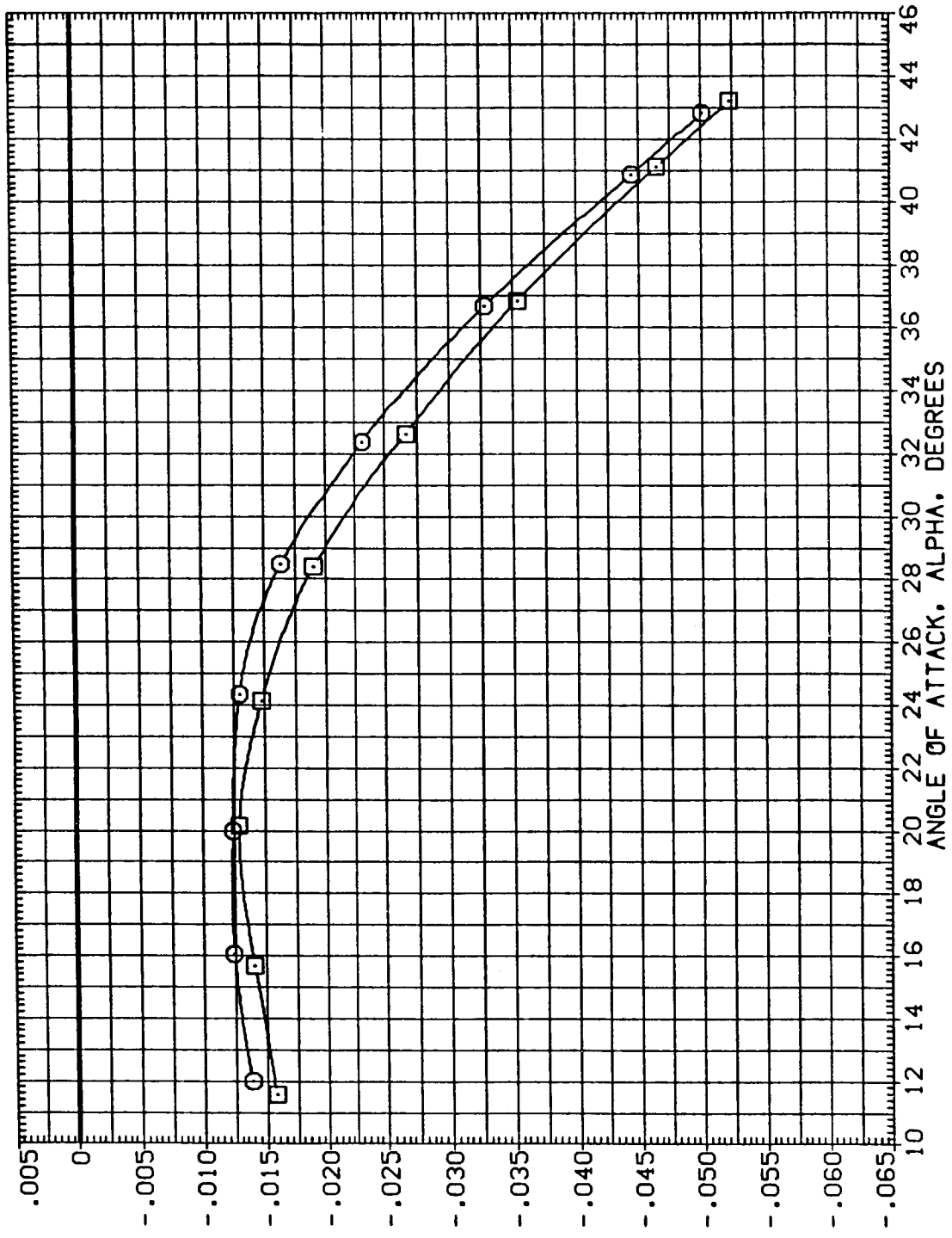


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL: (EE0004) (EE0020) ☐ (EE0004) (EE0020)

CONFIGURATION DESCRIPTION: AMES 3.5-190 0A98 (011-M7-M14) AMES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA: .000 .000

ELEVON: .000 .000

BOFLAP: -11.700 -11.700

SPOBRK: 85.000 85.000

REFERENCE INFORMATION:

	SREF	LREF	BREF	XMRP	YMRP	ZMRP	SCALE
2690.0000	474.8000	936.6800	1076.7000	375.0000	0.0150		
SQ.FT.	IN.	IN.	IN.	IN.	IN.	IN.	

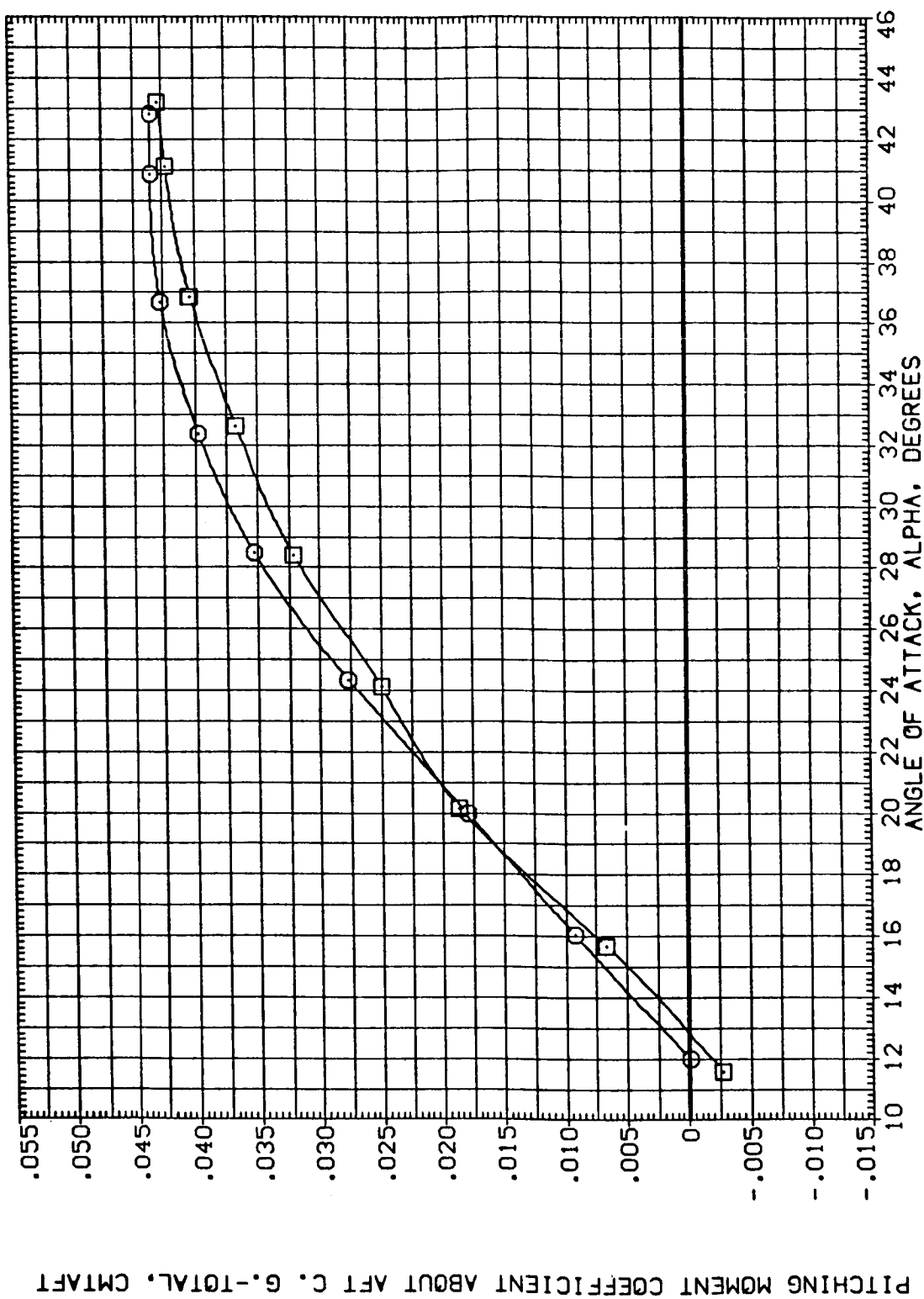


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0004)	AMES 3.5-190 DA98 (011-M7+M14)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(EE0020)	AMES 3.5-190 DA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

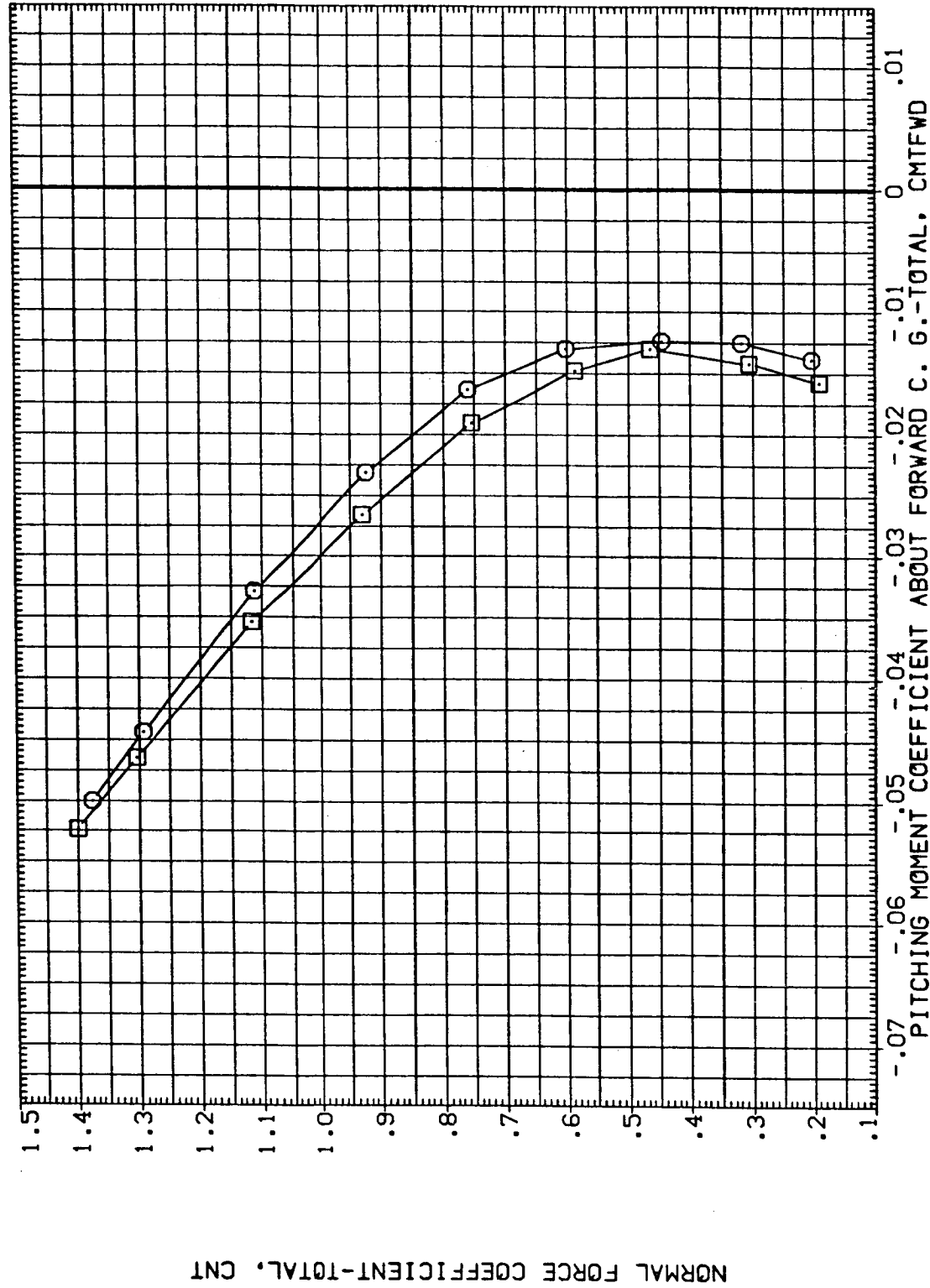


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (EEQ004)  
(EEQ020)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-177-M14)  
AMES 3.5-190 0A98 (011-177-M14-124-DUMMY STING)

BETA .000  
.000

ELEVON .000  
.000

BDLAP -11.700  
-11.700

SPOBRK 85.000  
85.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

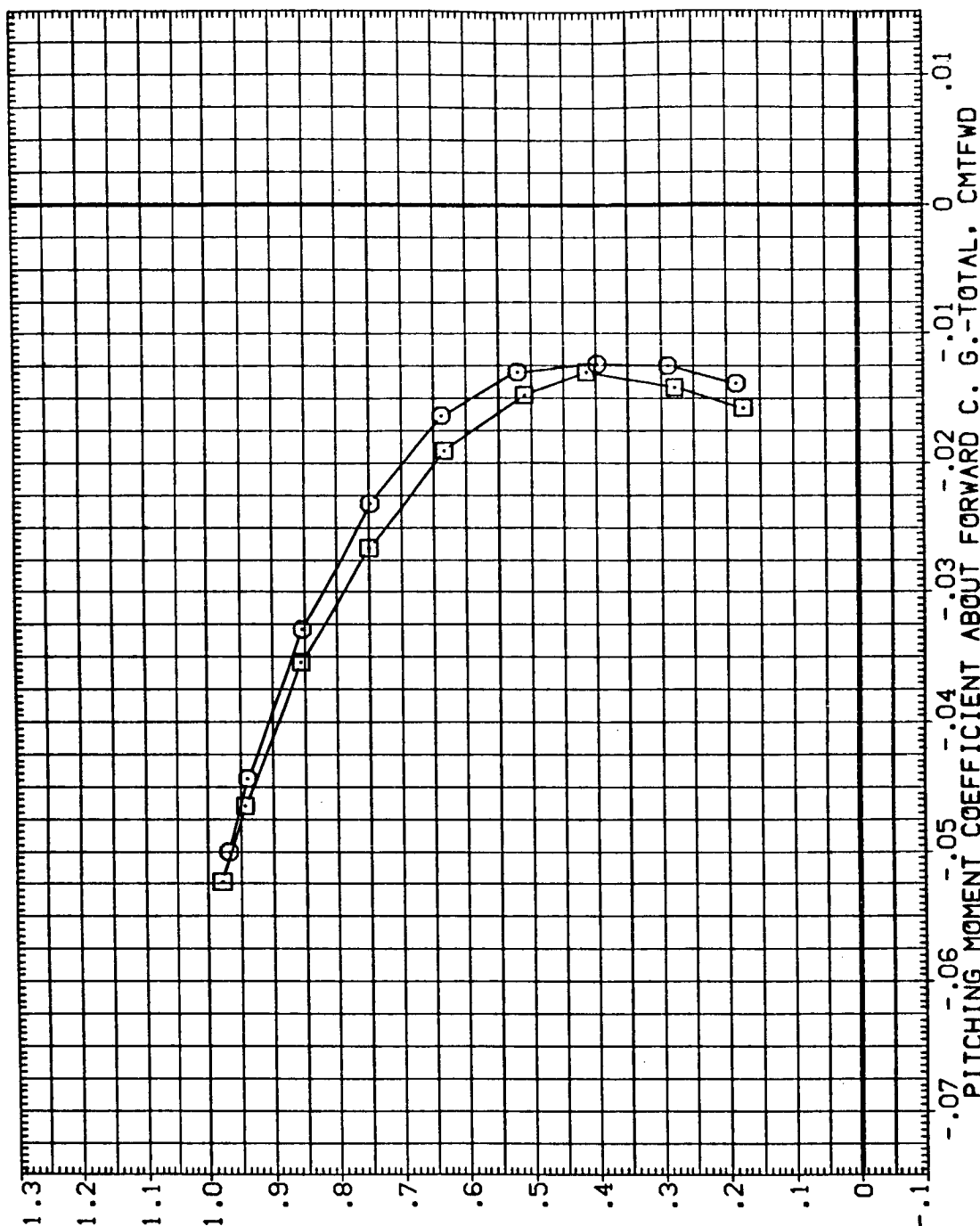


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (EE0004)    AMES 3.5-190 DASH (011-M7+M14)  
 (EE0020)    AMES 3.5-190 DASH (011-M7+M14-N24+DUMMY STING)

BETA    ELEVON    BOFLAP    SPODBK  
 .000    .000    -11.700    85.000  
 .000    .000    -11.700    85.000

REFERENCE INFORMATION  
 SREF    2690.0000    SQ.FT.  
 LREF    474.8000    IN.  
 BREF    936.8800    IN.  
 XMRP    1076.7000    IN.X0  
 YMRP    .0000    IN.Y0  
 ZMRP    375.0000    IN.Z0  
 SCALE    .0150

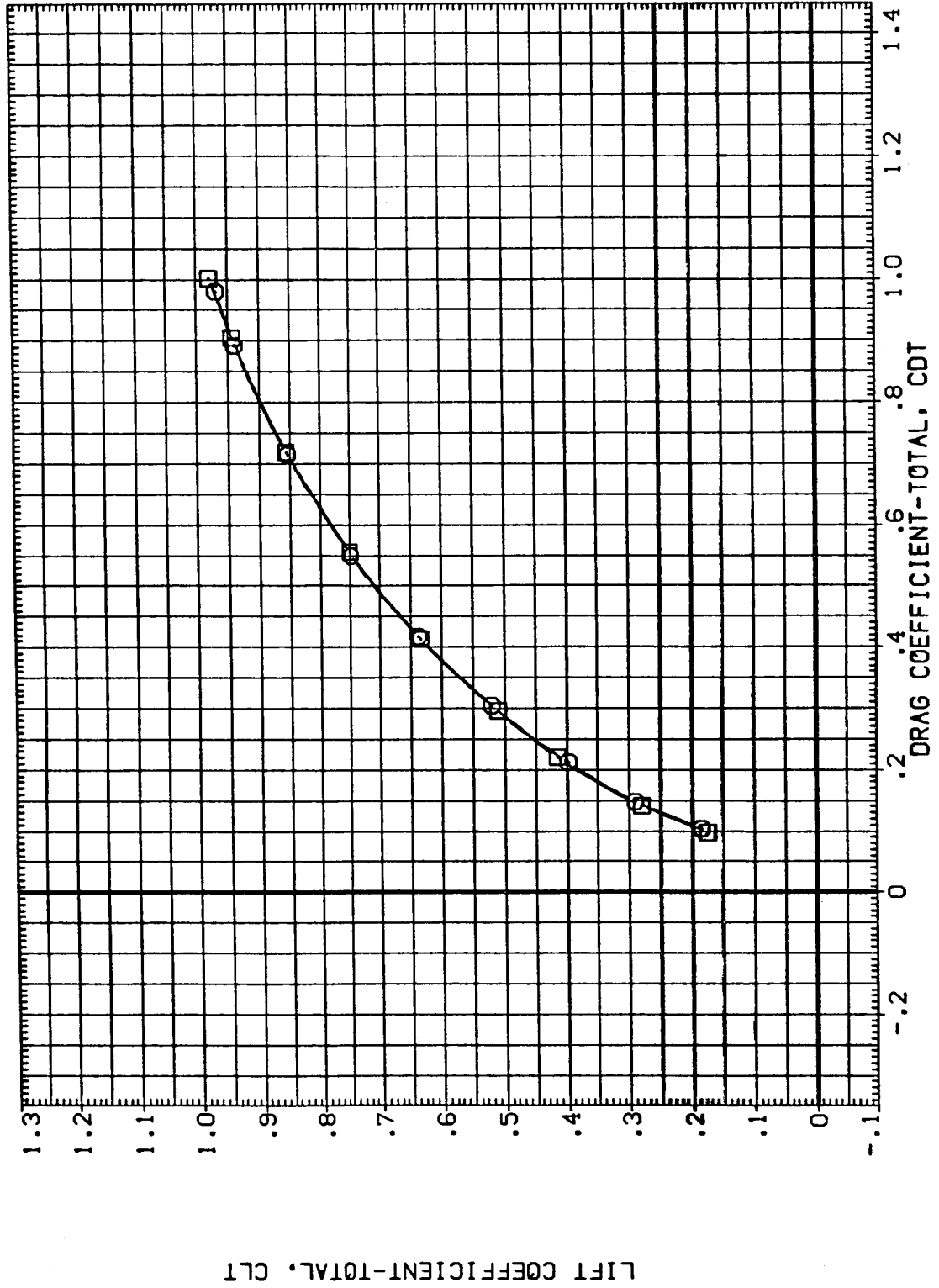


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (EE0004) (EE0020)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-M7+M14)  
 AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 85.000 85.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

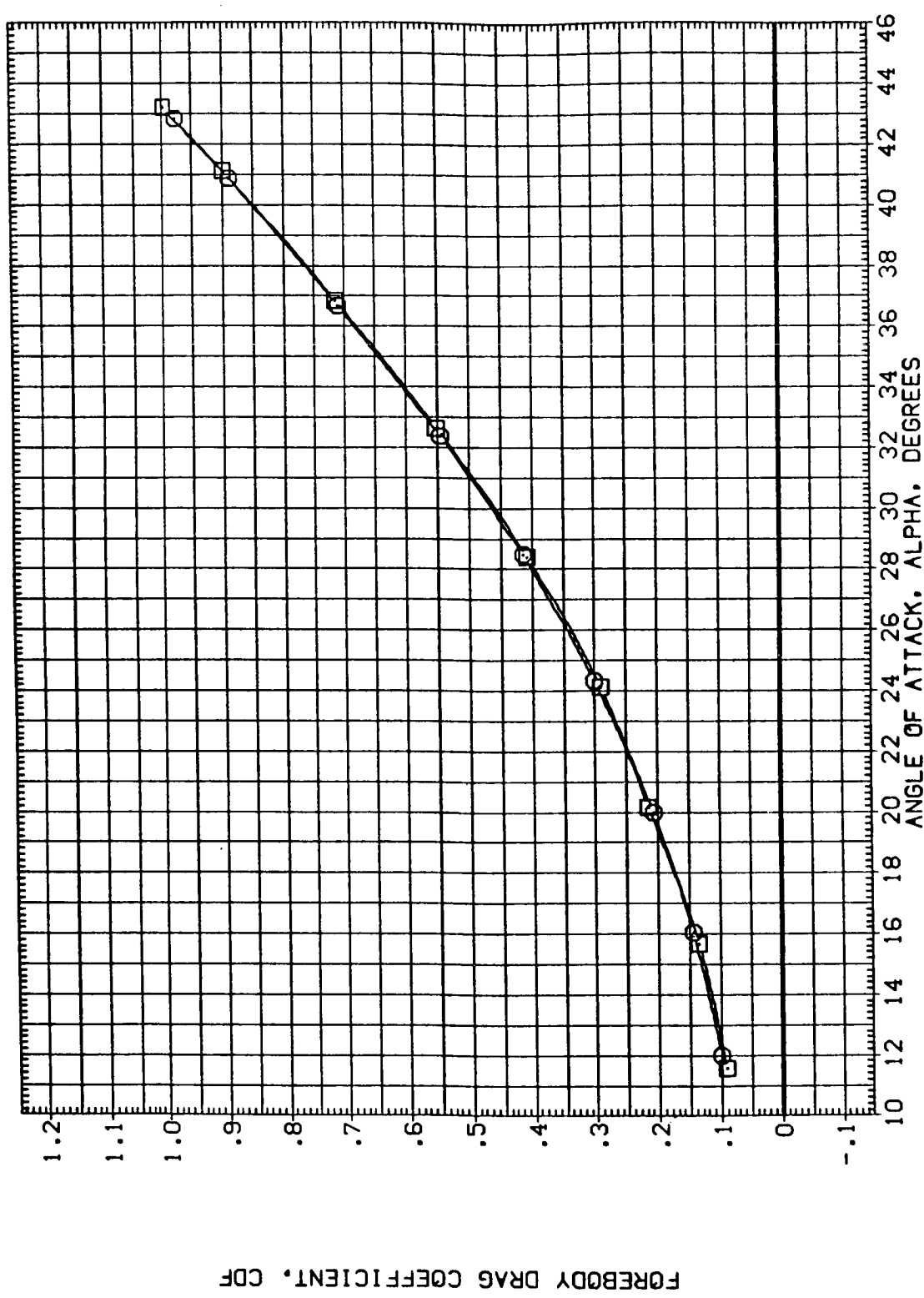


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDF LAP	SPOBRK	REFERENCE INFORMATION
(EE0004)	AMES 3.5-150 0A98 (011-M7+M14)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(EE0020)	AMES 3.5-150 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

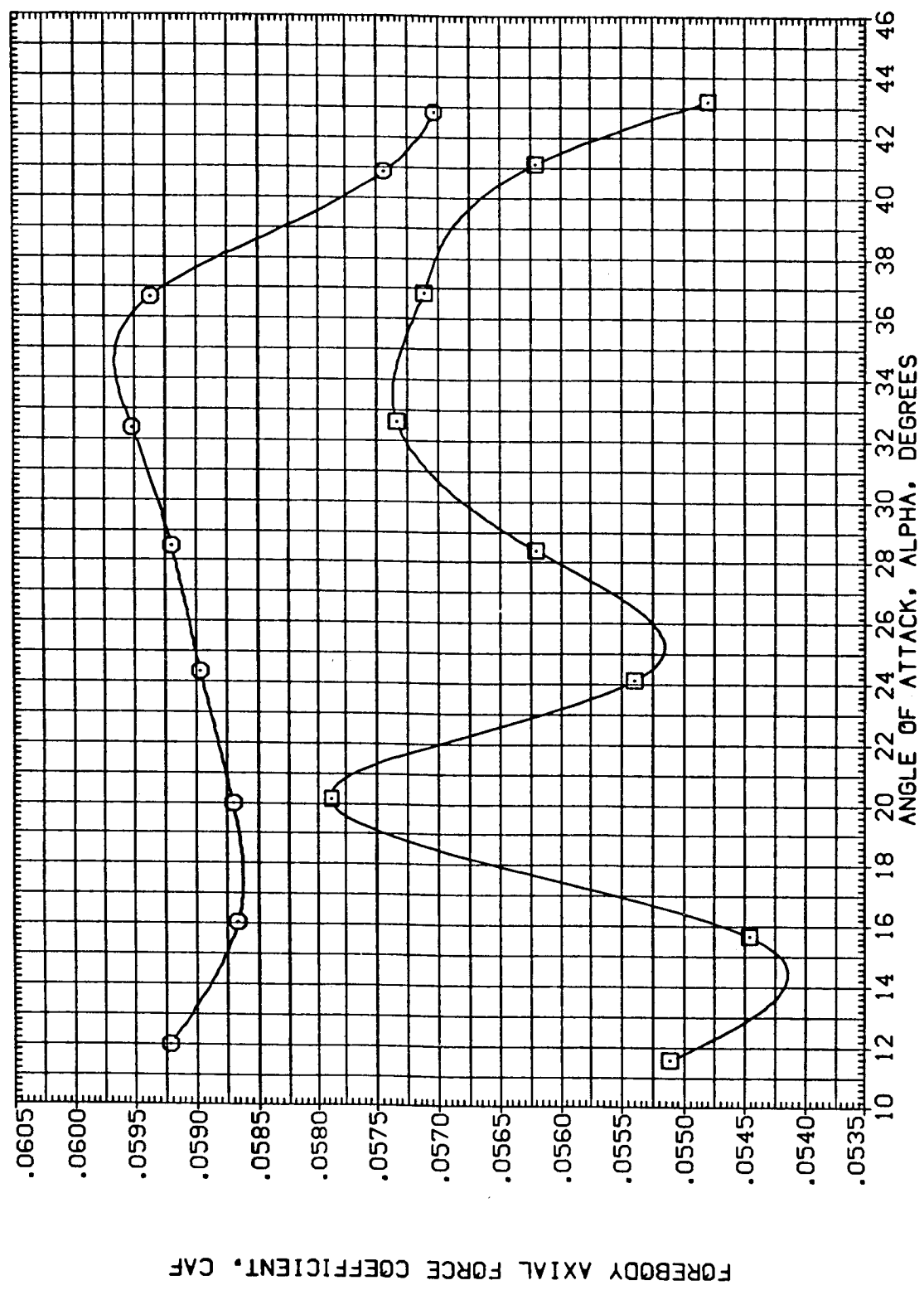


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL  
(EE0004)  
(EE0020)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 OA98 (011-M7-H14)  
AMES 3.5-190 OA98 (011-M7-H14-N24-DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
-11.700  
-11.700

SPOBRK  
85.000  
85.000

REFERENCE INFORMATION  
SREF 2650.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

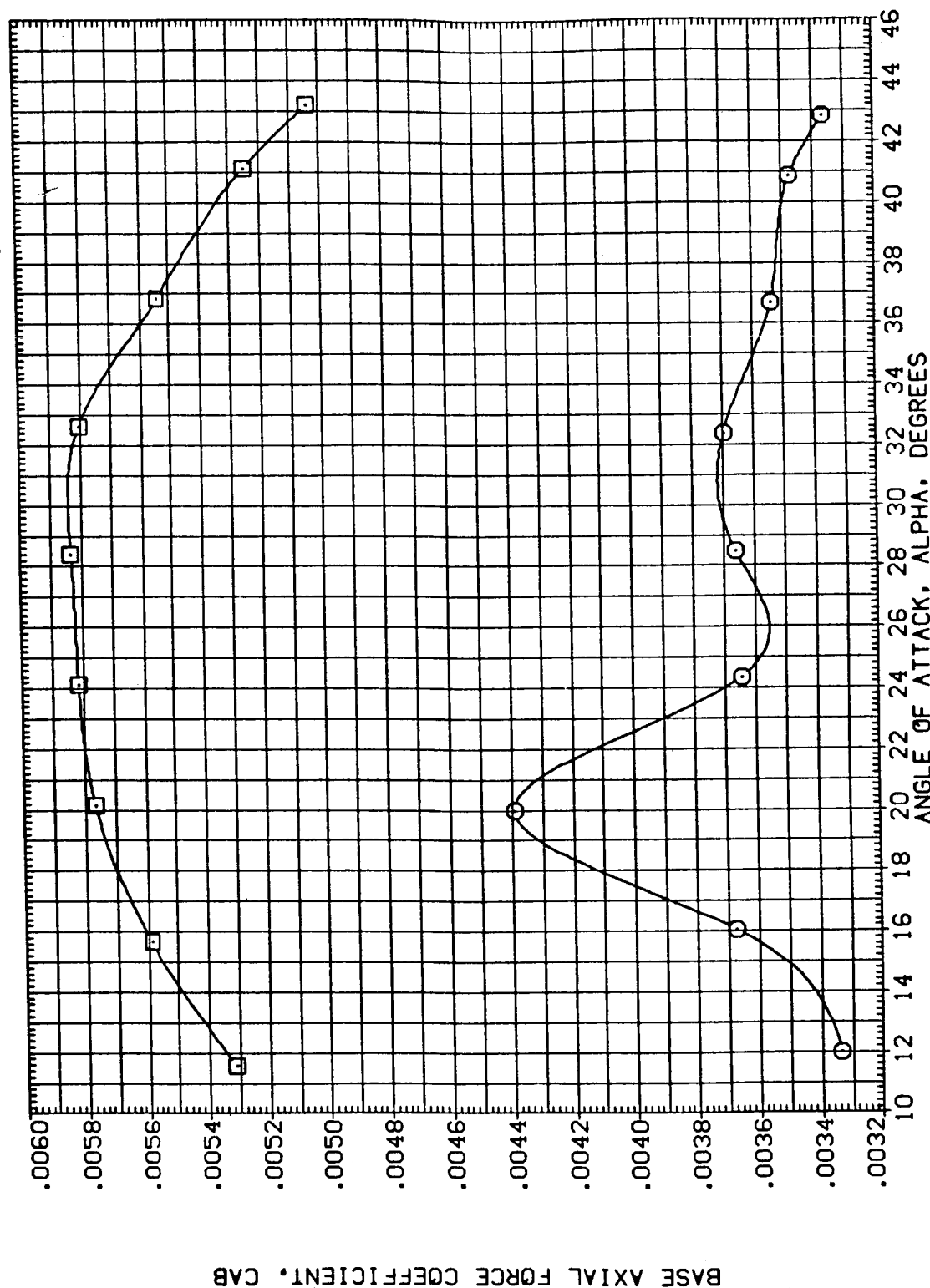


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (BE0004) (BE0020)

CONFIGURATION DESCRIPTION  
 AVES 3.5-190 DAY8 (011-M7+M14)  
 AVES 3.5-190 DAY8 (011-M7+M14-N24+DUMMY STING)

BETA .000  
 ELEVON .000  
 BOFLAP -11.700  
 SPOBRK 85.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP .0000 IN.Z0  
 SCALE .0150

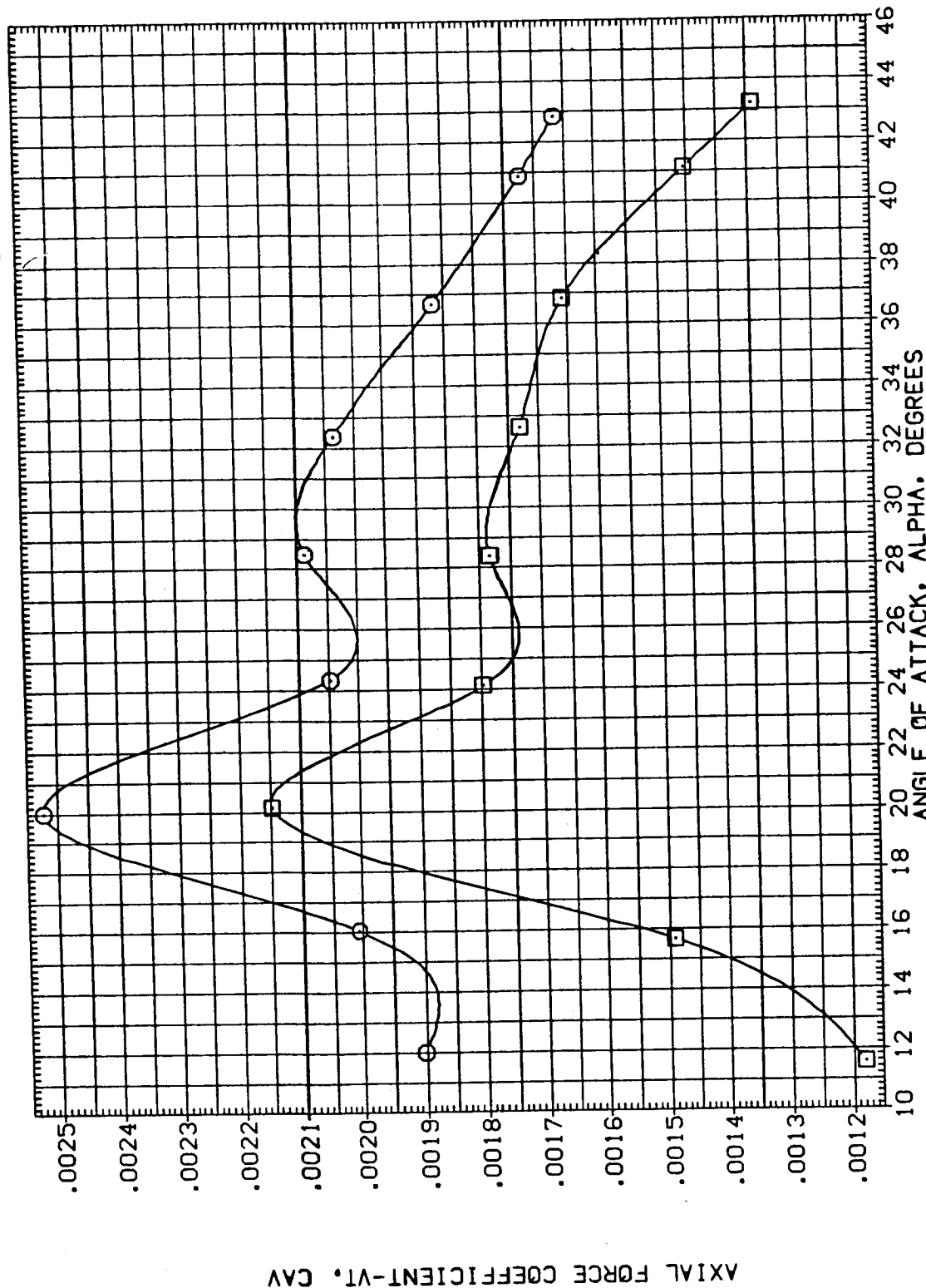


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BE0004)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(BE0020)	AMES 3.5-190 0A98 (011-M7+M14+N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

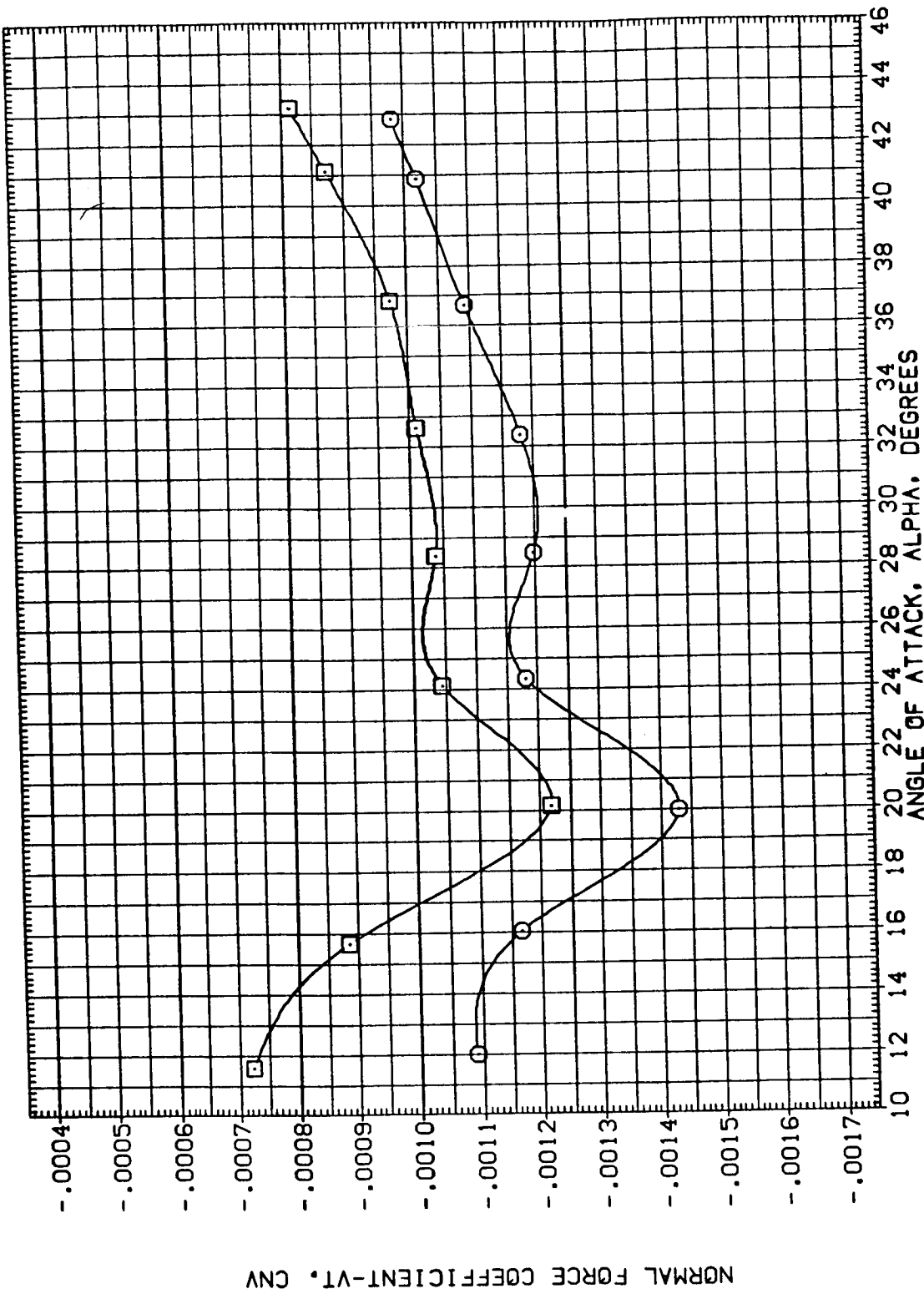


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (BE0004) (BEG020)

CONFIGURATION DESCRIPTION  
 APES 3.5-190 GA98 (011-M7-M14)  
 APES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPDBRK 85.000 85.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.XG  
 YMRP .0000 IN.YG  
 ZMRP 375.0000 IN.ZG  
 SCALE .0150

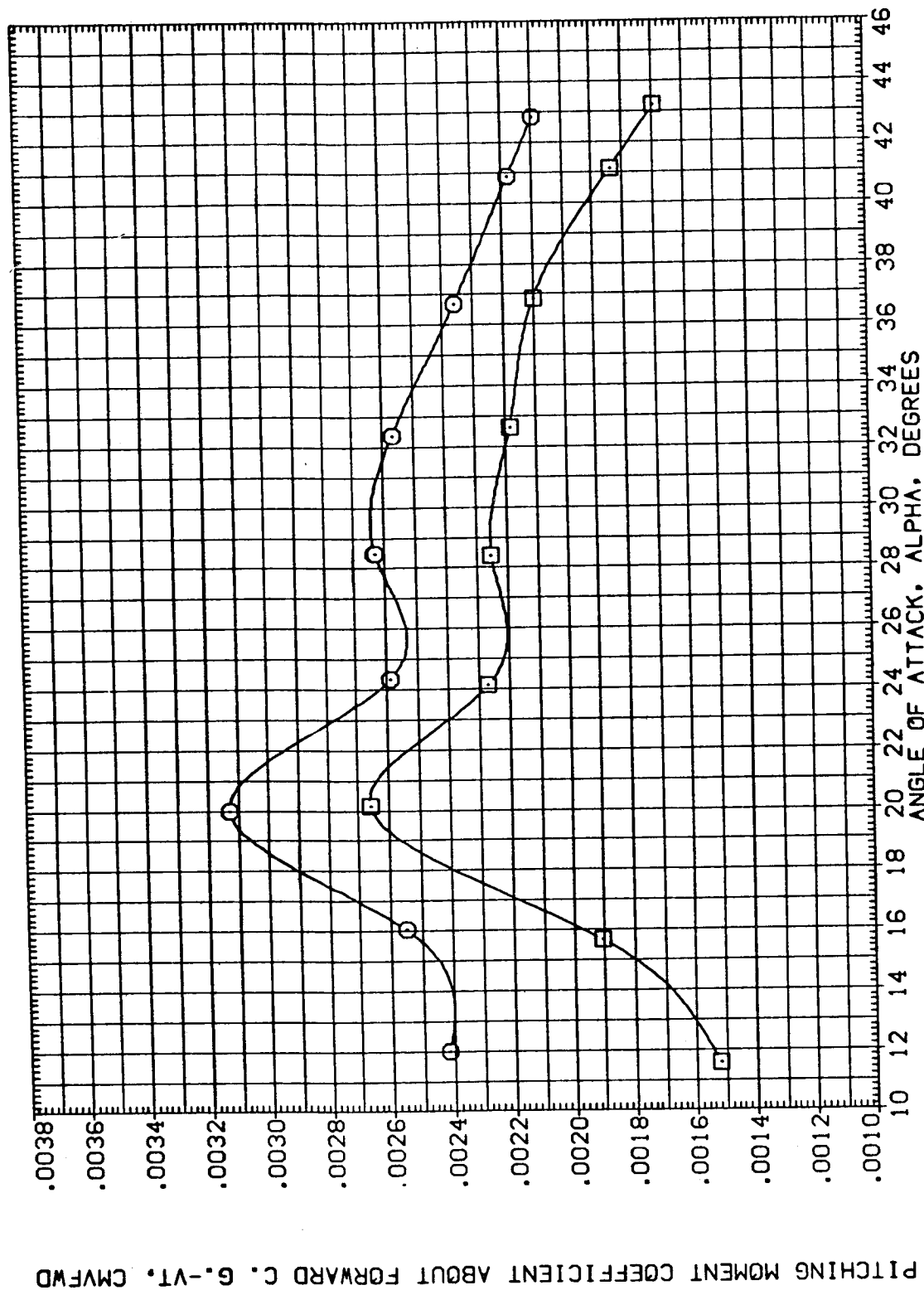


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25

DATA SET SYMBOL (BE0004) (BE0020)

CONFIGURATION DESCRIPTION  
 AVES 3.5-190 0A98 (011-H7+H14)  
 AVES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP -11.700 -11.700

SPOBRK 85.000 85.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

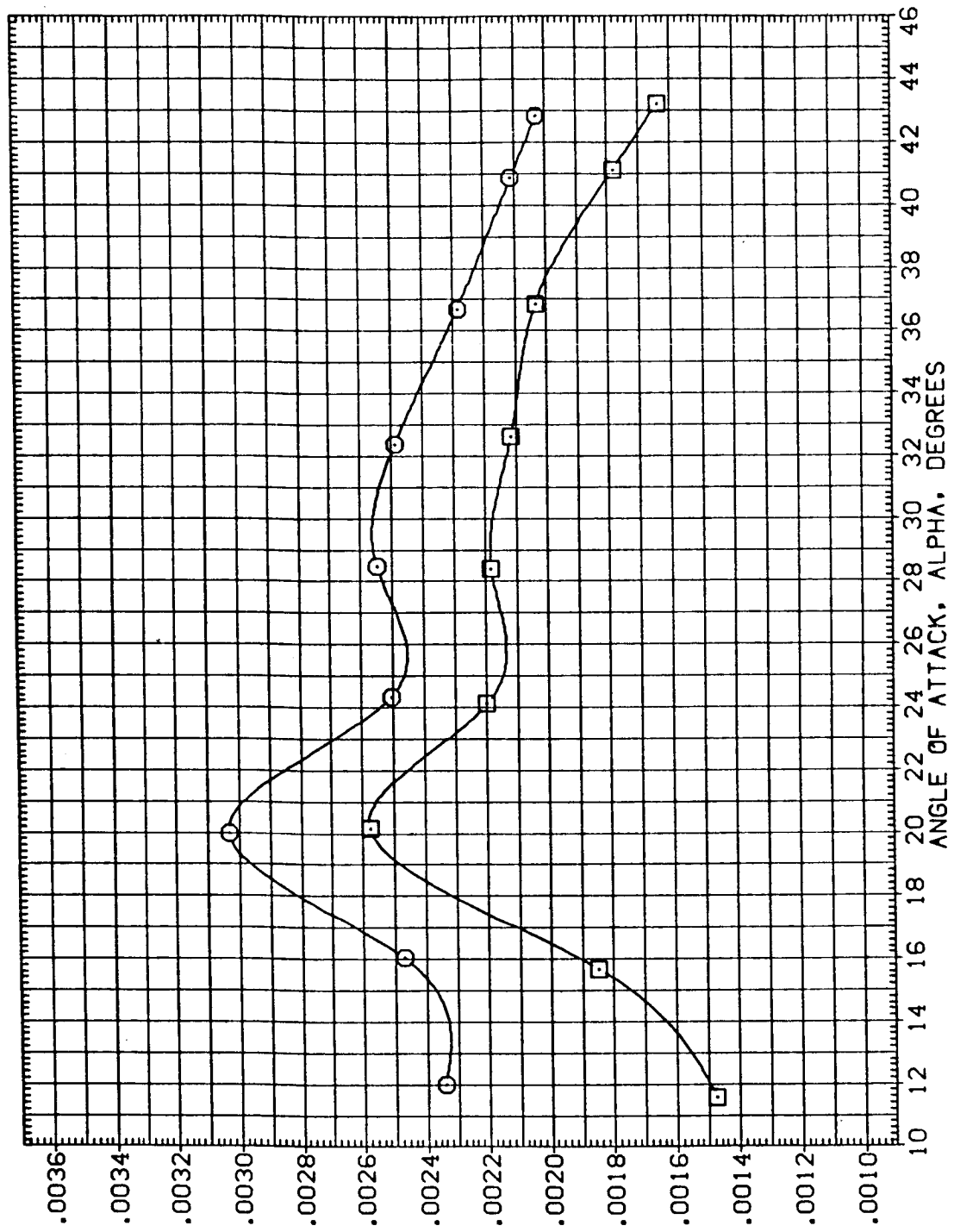


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25



AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0020)

SYMBOL	MACH	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	5.300	.000	ELEVON .000	SREF 2690.0000 SQ.FT.
		BOFLAP -11.700	SPDBRK 85.000	LREF 474.8000 IN.
		RUDDER .000		BREF 936.6800 IN.
				XMRP 1076.7000 IN.X0
				YMRP .0000 IN.Y0
				ZMRP 375.0000 IN.Z0
				SCALE .0150

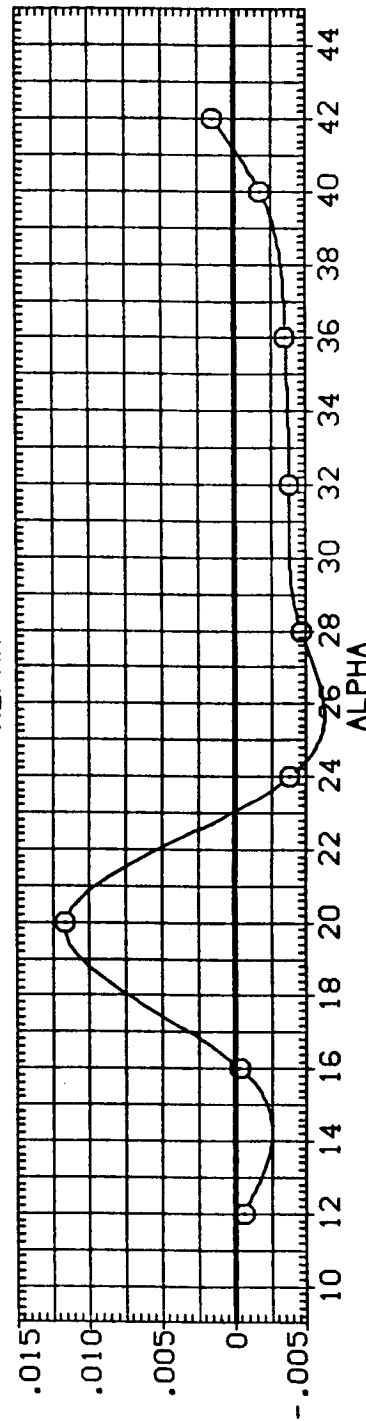
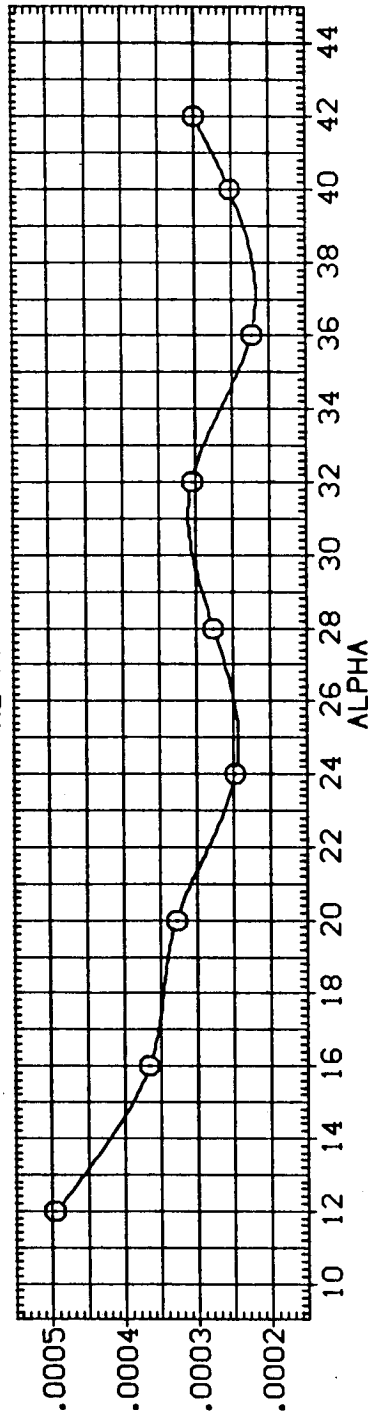
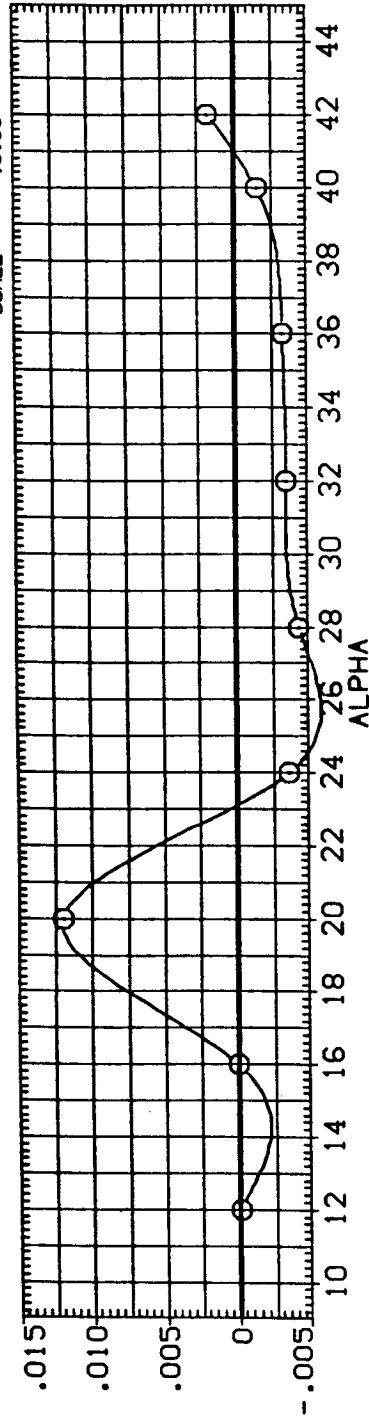


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL  
O

MACH  
5.300

BETA  
BOFLAP  
RUDDER

PARAMETRIC VALUES  
.000 ELEVON  
-11.700 SPOBRK  
.000

.000  
85.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.XG  
YMRP .0000 IN.YG  
ZMRP 375.0000 IN.ZG  
SCALE .0150

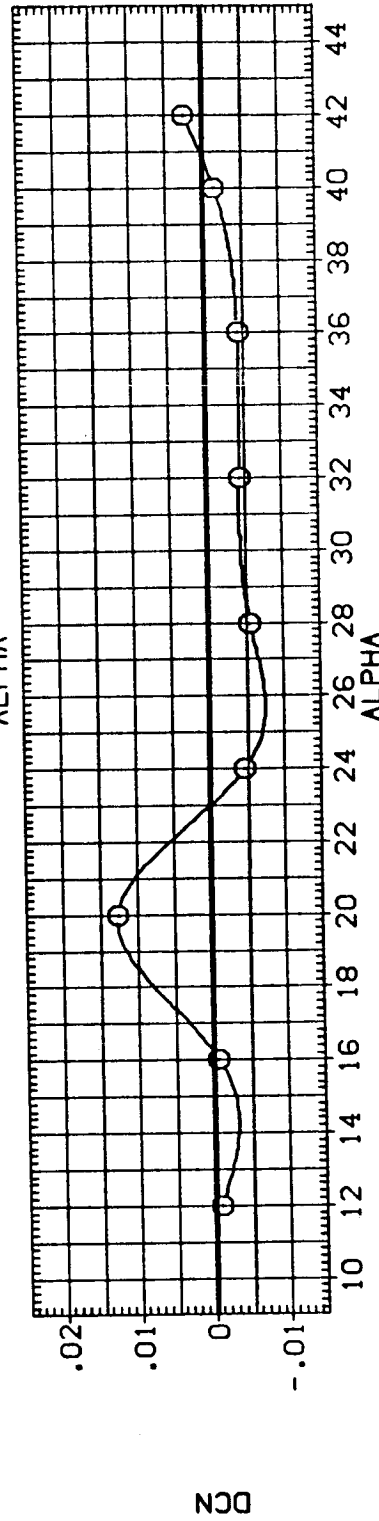
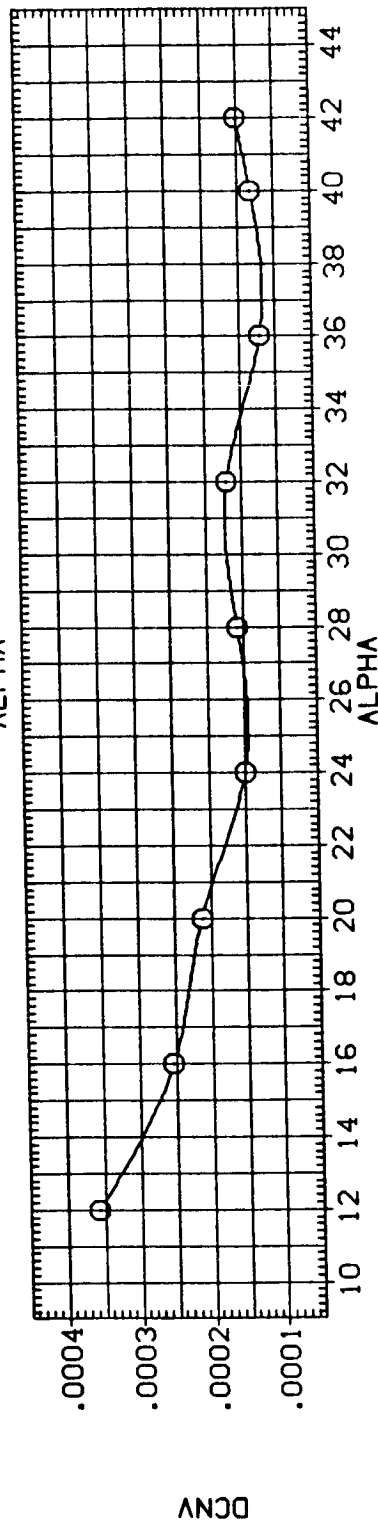
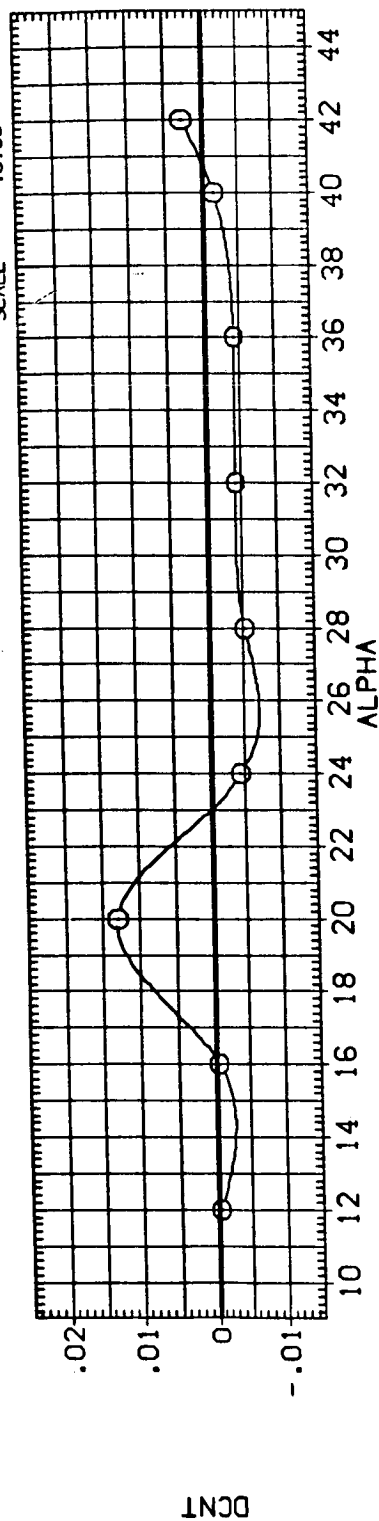


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



SYMBOL 

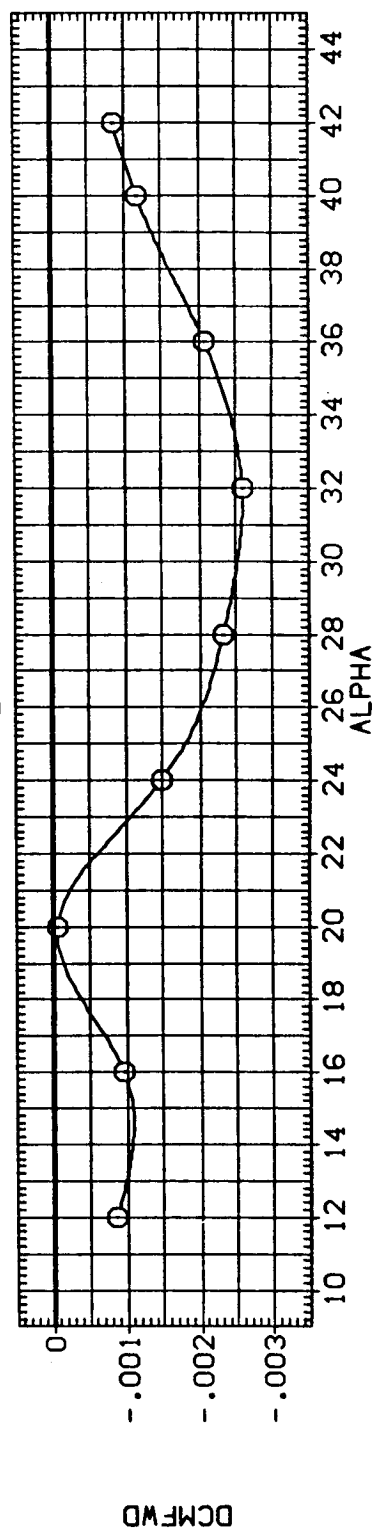
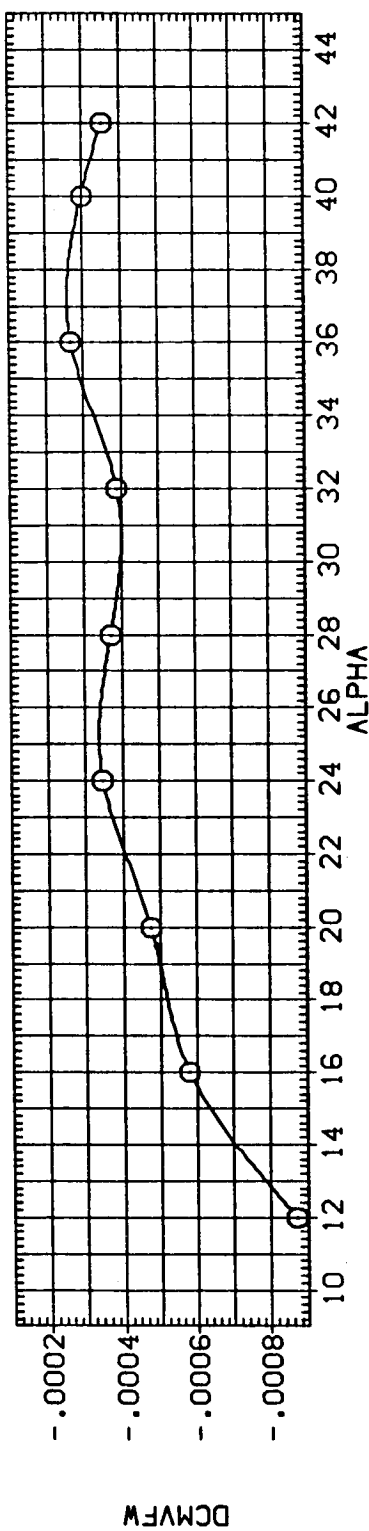
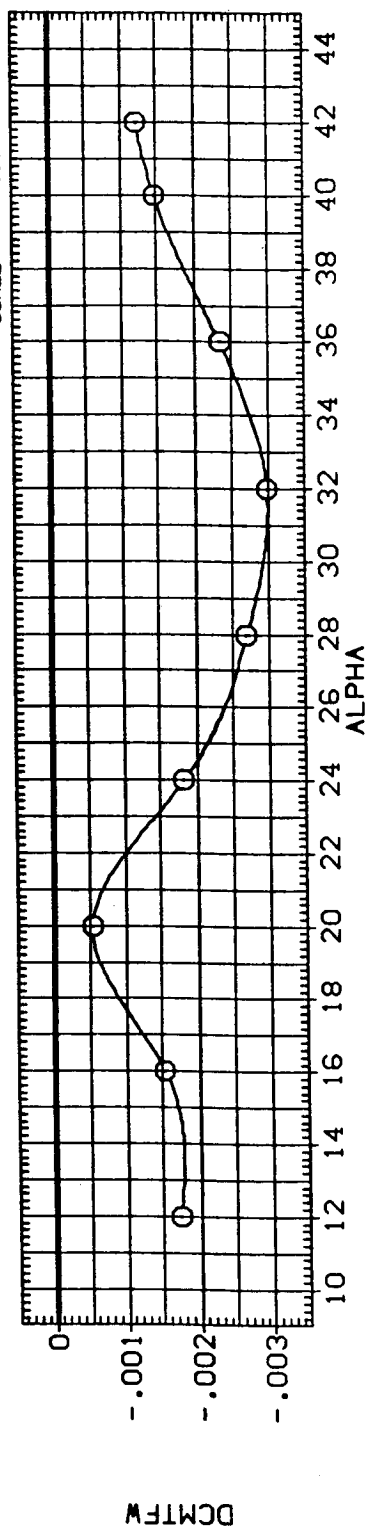
**MACH**  
**5.300**

BETA  
BDFLAP  
RUDDER

PARAMETRIC VALUES	
ELEVON	.000
SPOBRK	-11.700
	.000

85.000  
.000

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT
LREF	474.8000 IN.
BREF	936.6800 IN.
XMRP	1076.7000 IN.X
YMRP	.0000 IN.Y
ZMRP	375.0000 IN.Z
SCALE	.0150



SYMBOL O MACH 5.300

PARAMETRIC VALUES

BETA	.000	ELEVON	.000
BOFLAP	-11.700	SPOBRK	85.000
RUDDER	.000		

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8000	IN.
BREF	936.6800	IN.
XMRP	1076.7000	IN.X0
YMRP	.0000	IN.Y0
ZMRP	375.0000	IN.Z0
SCALE	.0150	

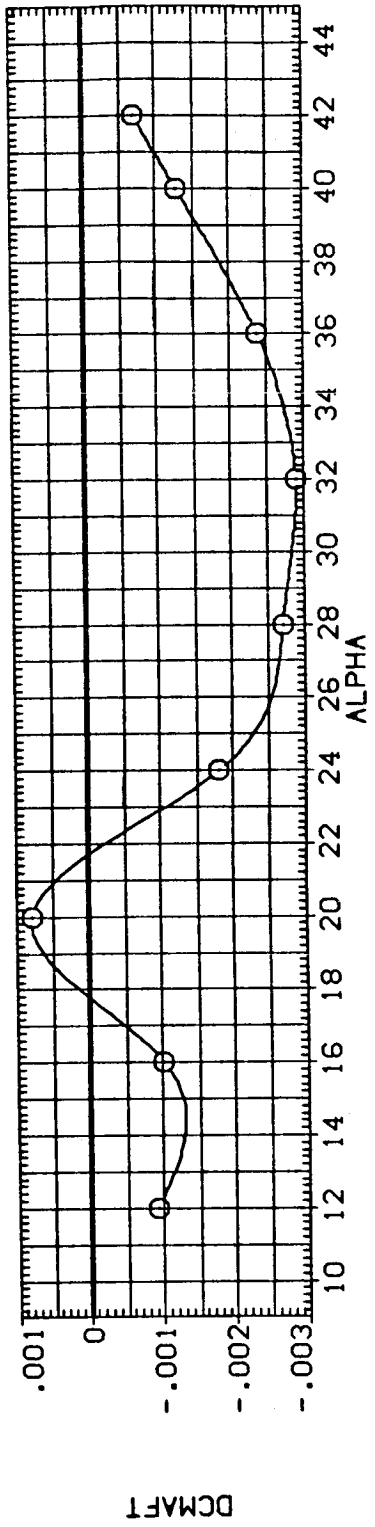
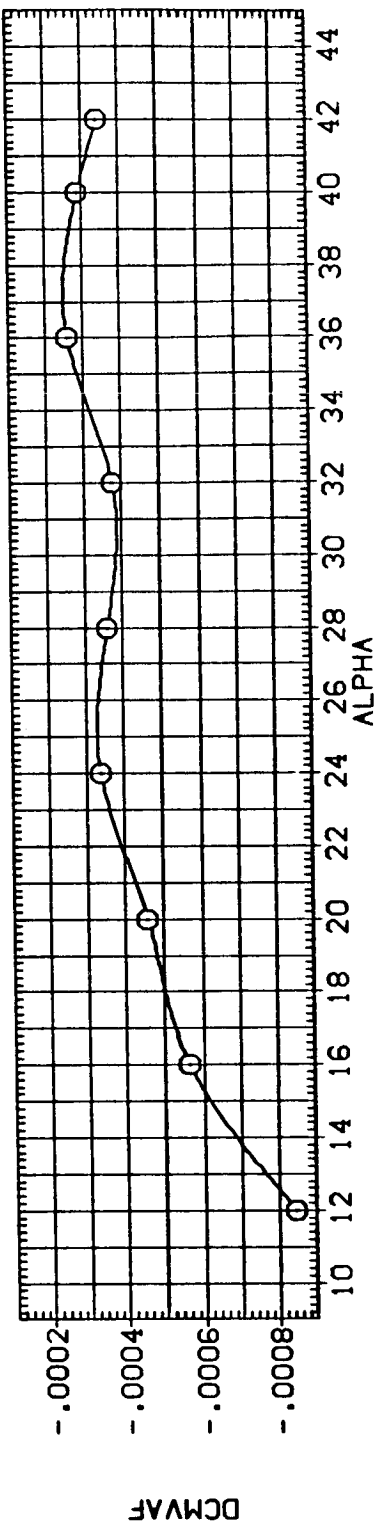
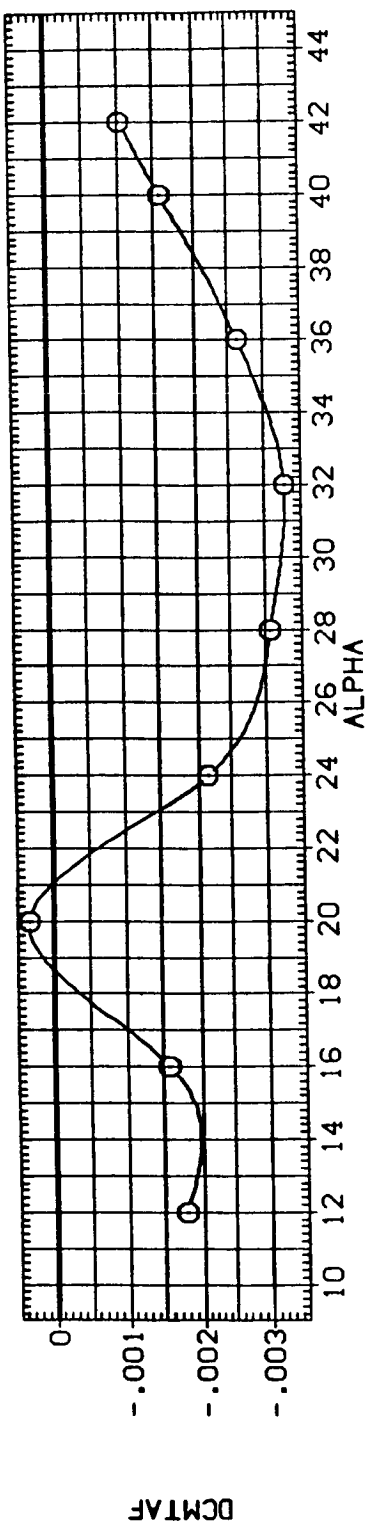


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



SYMBOL MACH  
O 5.300

BETA  
BOFLAP  
RUDDER

PARAMETRIC VALUES  
.000 ELEVON  
-11.700 SPOBRK  
.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.XG  
YMRP .0000 IN.YG  
ZMRP 375.0000 IN.ZO  
SCALE .0150

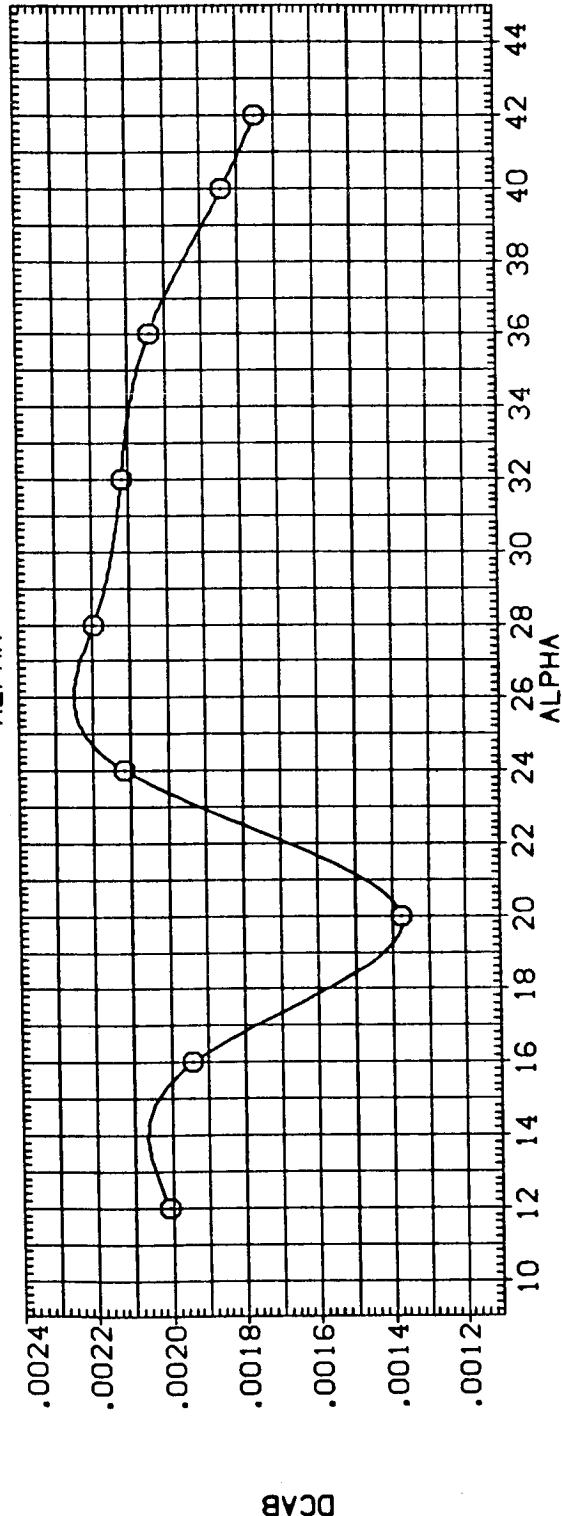
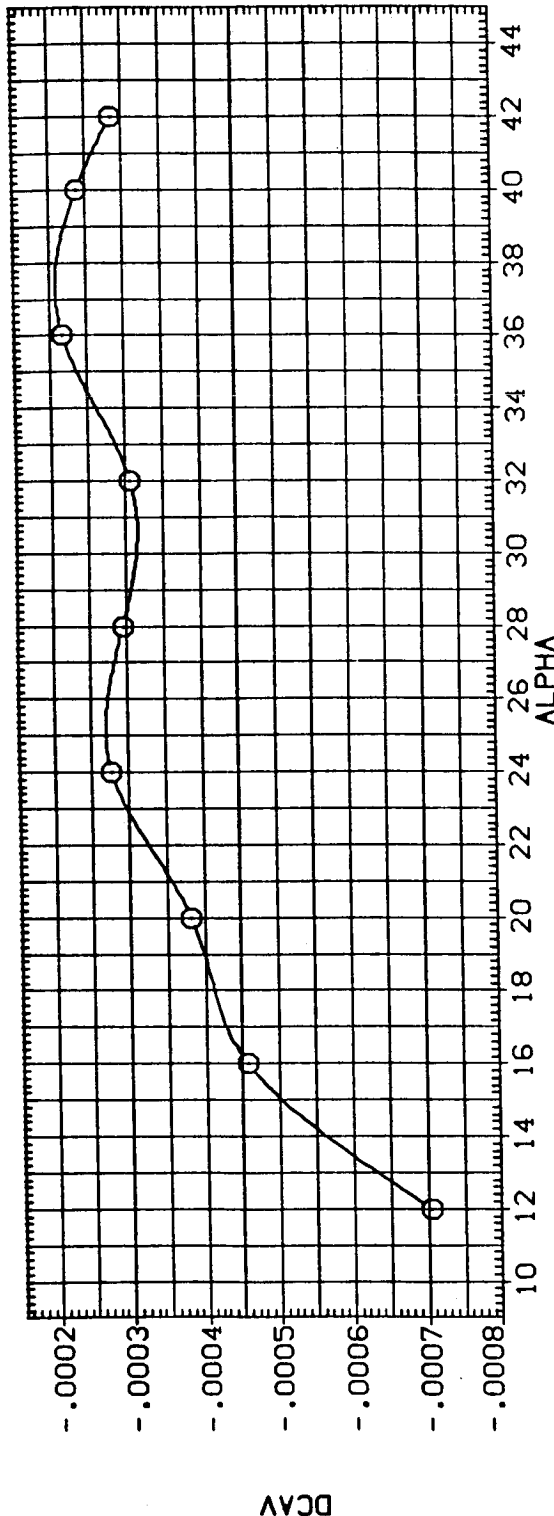


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE020)

SYMBOL  $\bigcirc$  MACH 5.300  
 REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PARAMETRIC VALUES  
 BETA .000 ELEVON .000  
 BOFLAP -11.700 SPOBRK 65.000  
 RUDDER .000

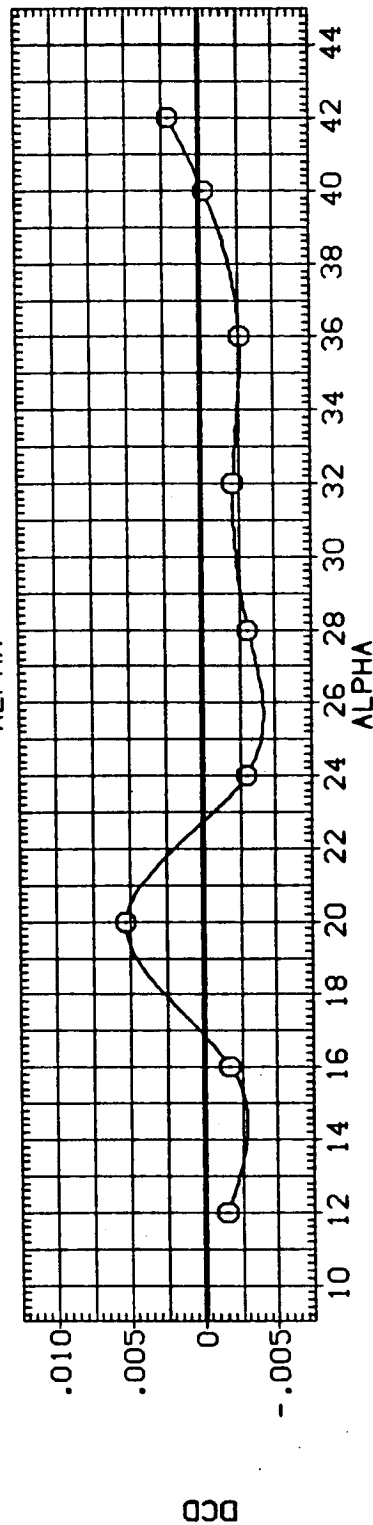
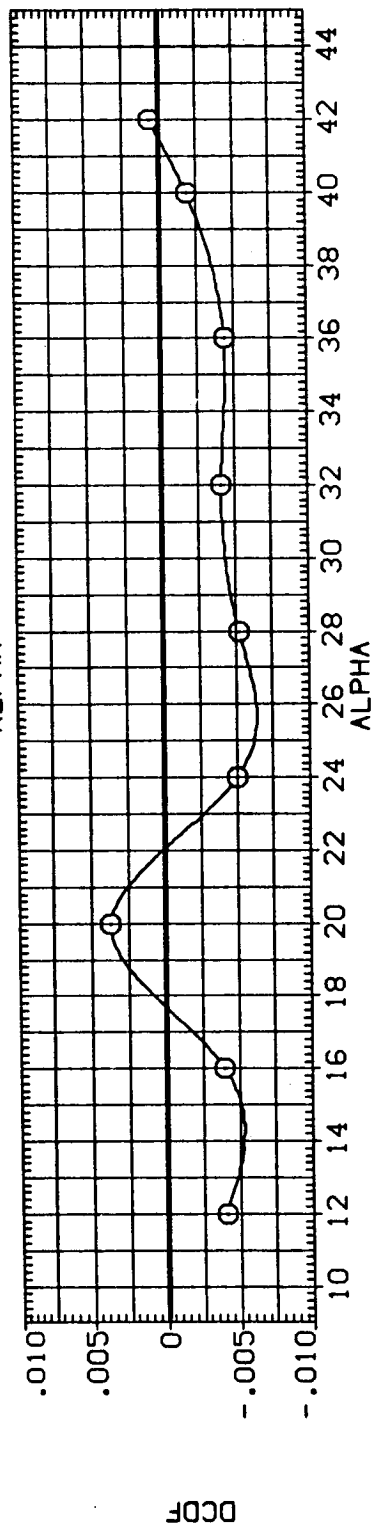
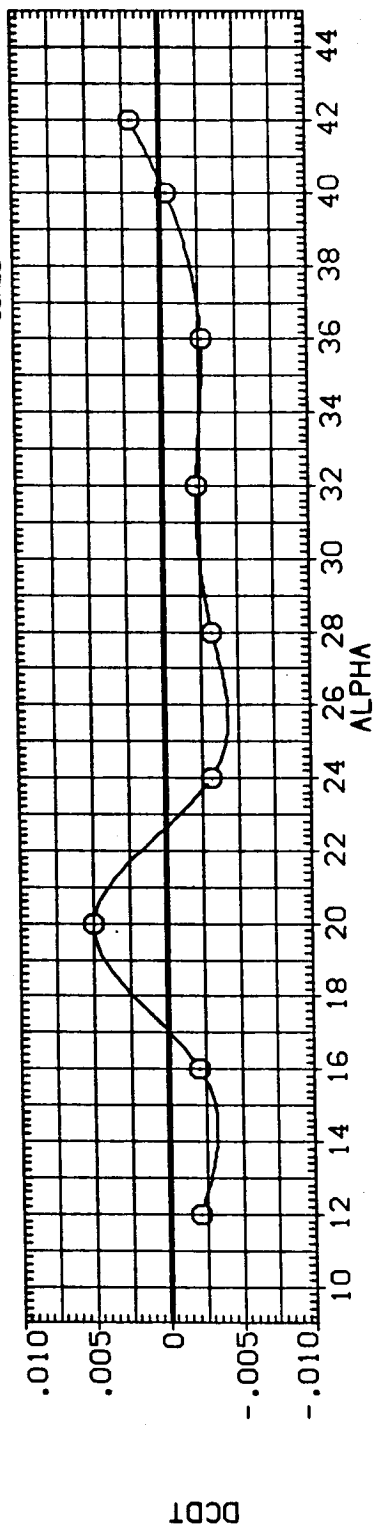


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL MACH  
O 5.300

PARAMETRIC VALUES  
BETA .000 ELEVON .000  
BOFLAP -11.700 SPOBRK 65.000  
RUDDER .000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

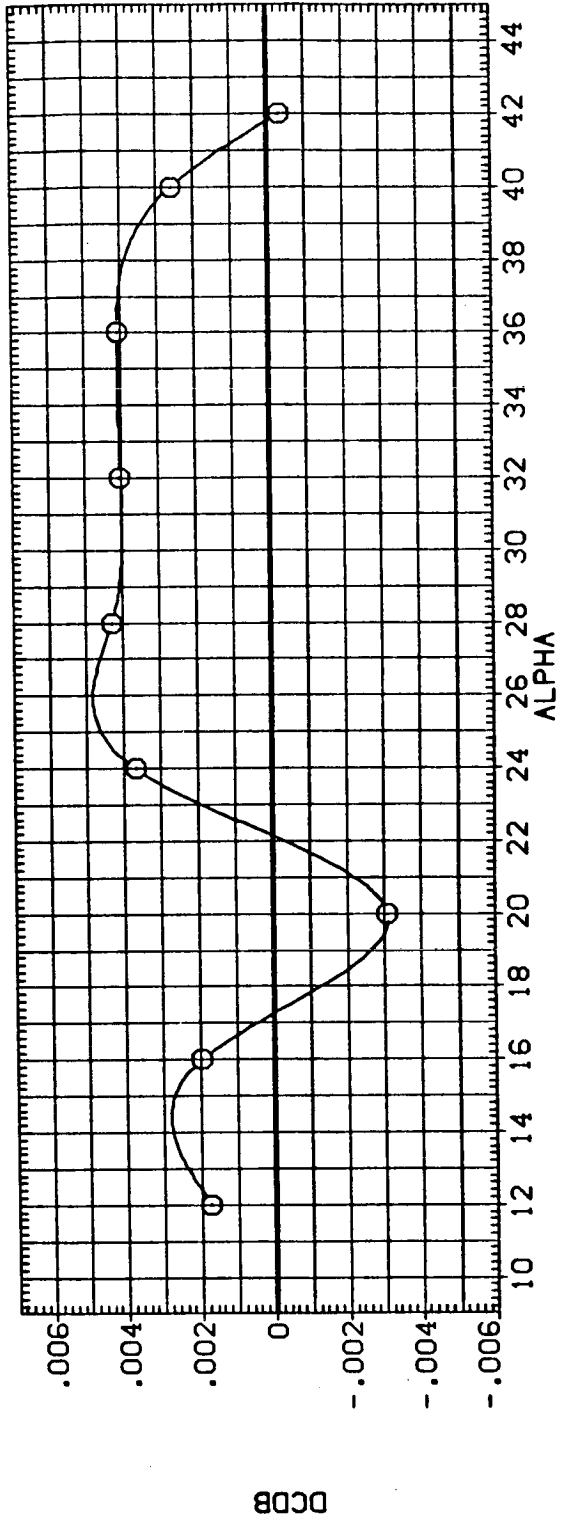
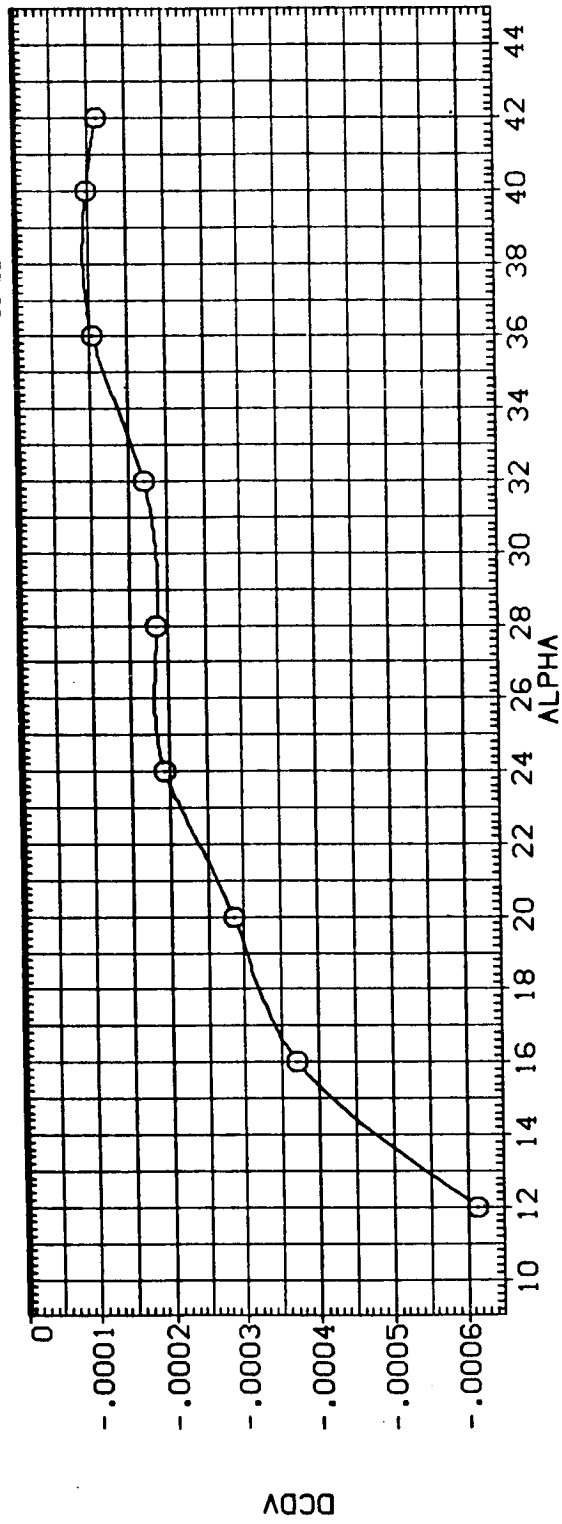


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AE0004)	AMES 3.5-190 OA98 (011-17-M14)	.000	.000	-11.700	85.000	SREF 2690.0000 SQ.FT.
(AE0020)	AMES 3.5-190 OA98 (011-17-M14-N24+DUMMY STING)	.000	.000	-11.700	85.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

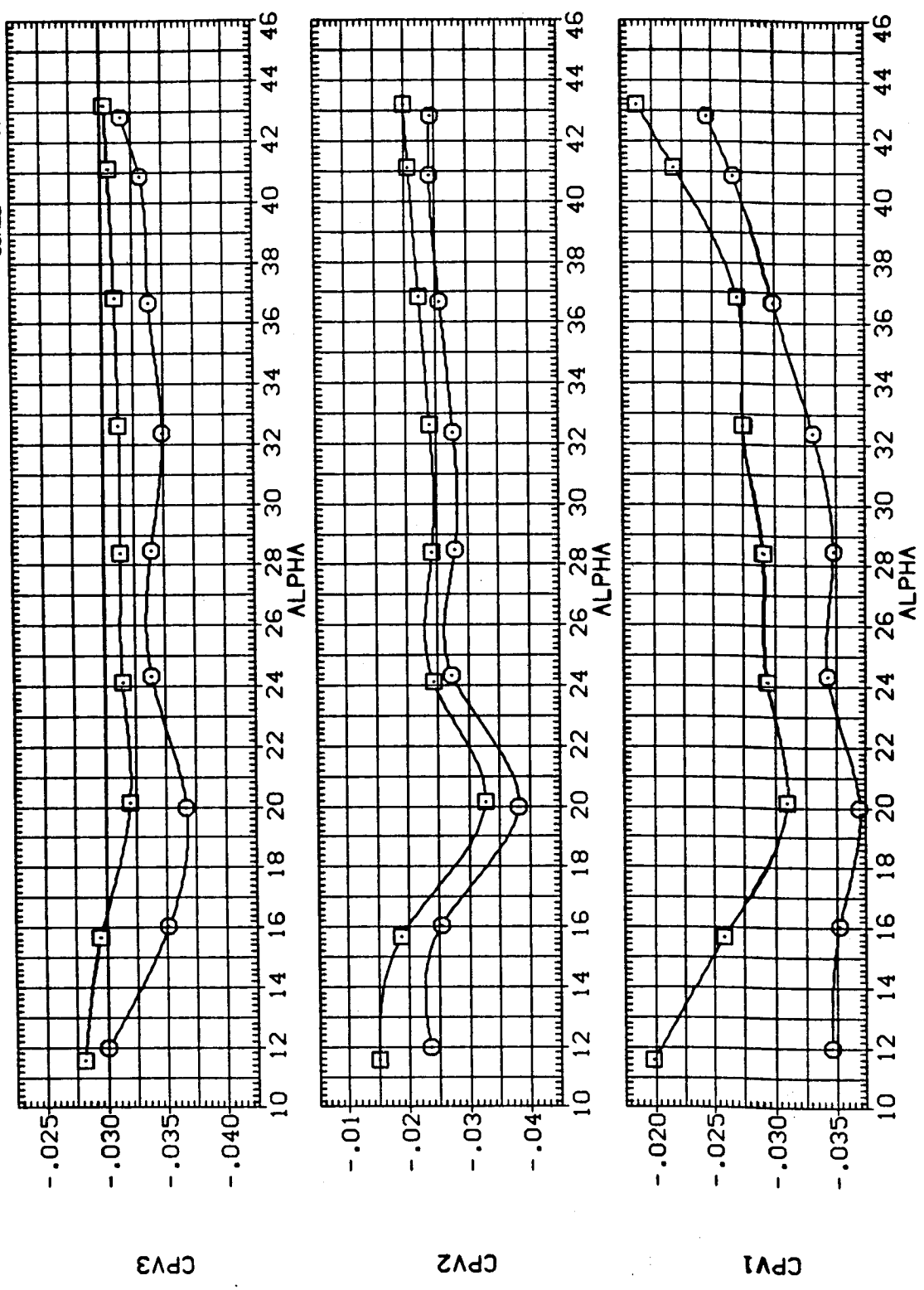


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 5.25





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0005)	AVES 3.5-190 GA98 (011-H7-H14)	.000	.000	16.300	55.000	SREF 2690.0000 50.FT.
(CE0021)	AVES 3.5-190 GA98 (011-H7-H14-N24-DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

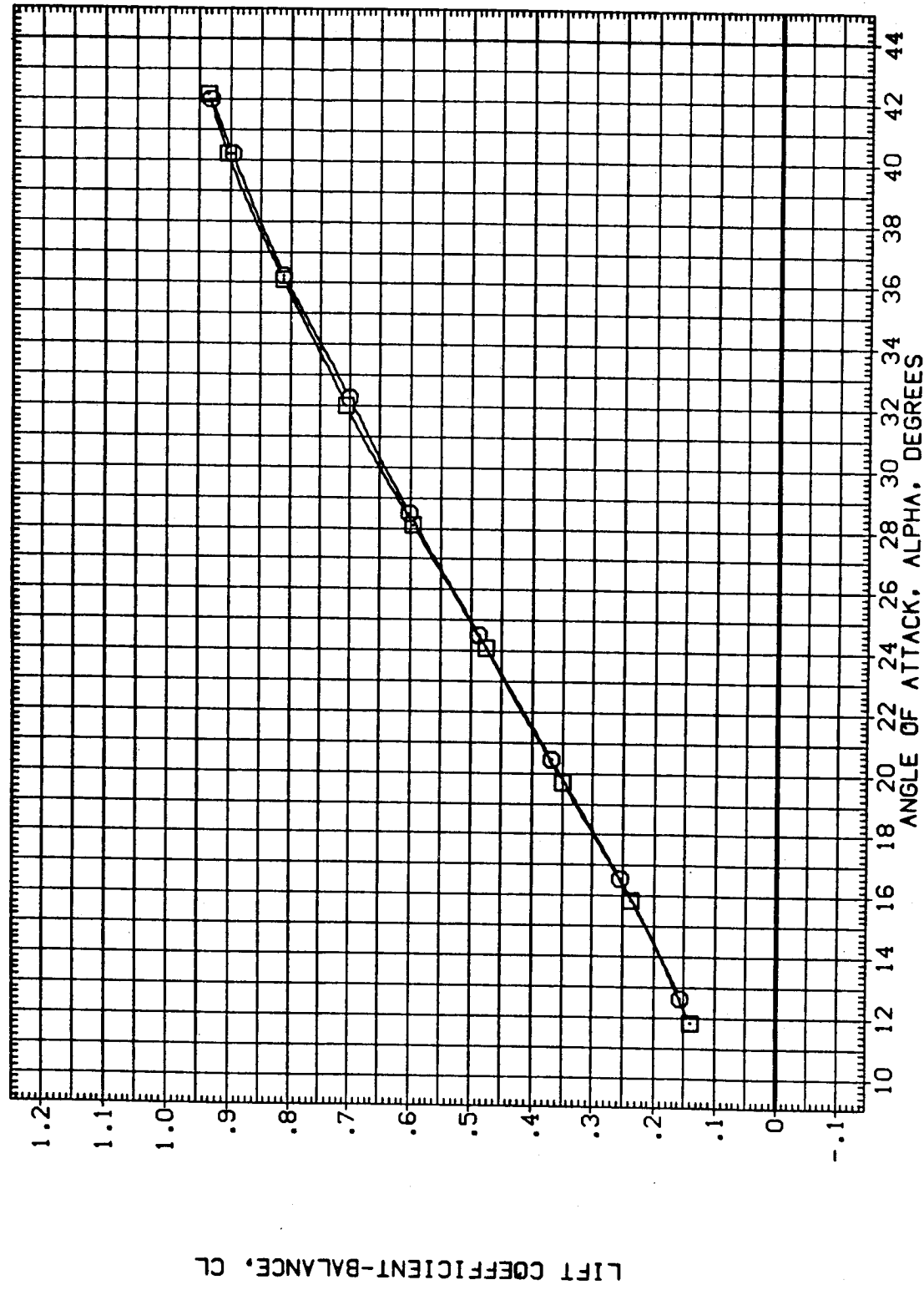


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0005)  
(CE0021)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 0A98 (011-17+H14)  
AMES 3.5-190 0A98 (011-17+H14+H24+DUMMY STING)

BETA .000  
ELEVON .000  
BDFLAP 16.300  
SPDBRK 55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 50.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

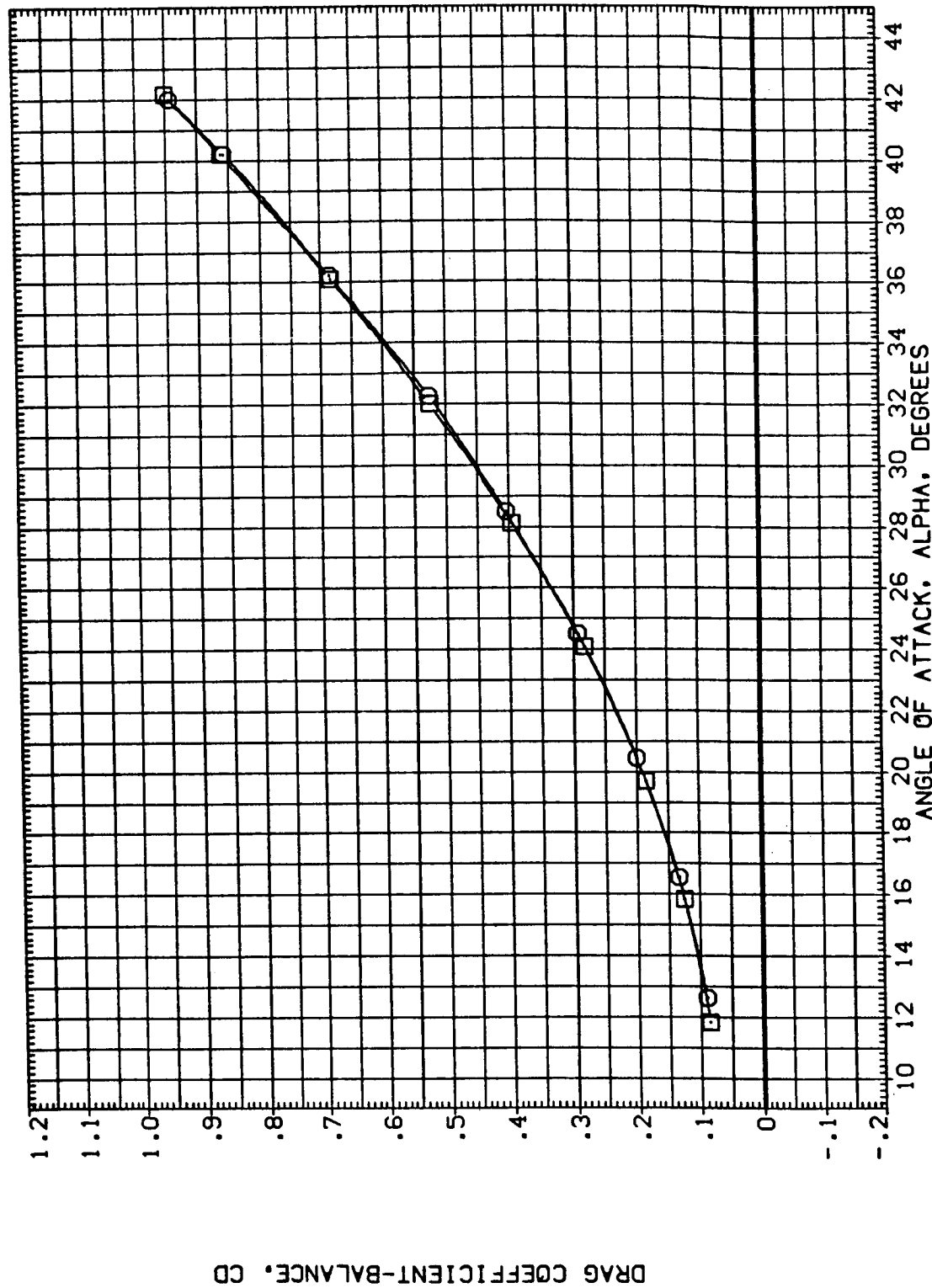


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(CE0005)	AVES 3.5-190 QAS8 (011-M7+M14)	.000	.000	16.300	55.000	SREF 2690.0000 SQ.FT.
(CE0021)	AVES 3.5-190 QAS8 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

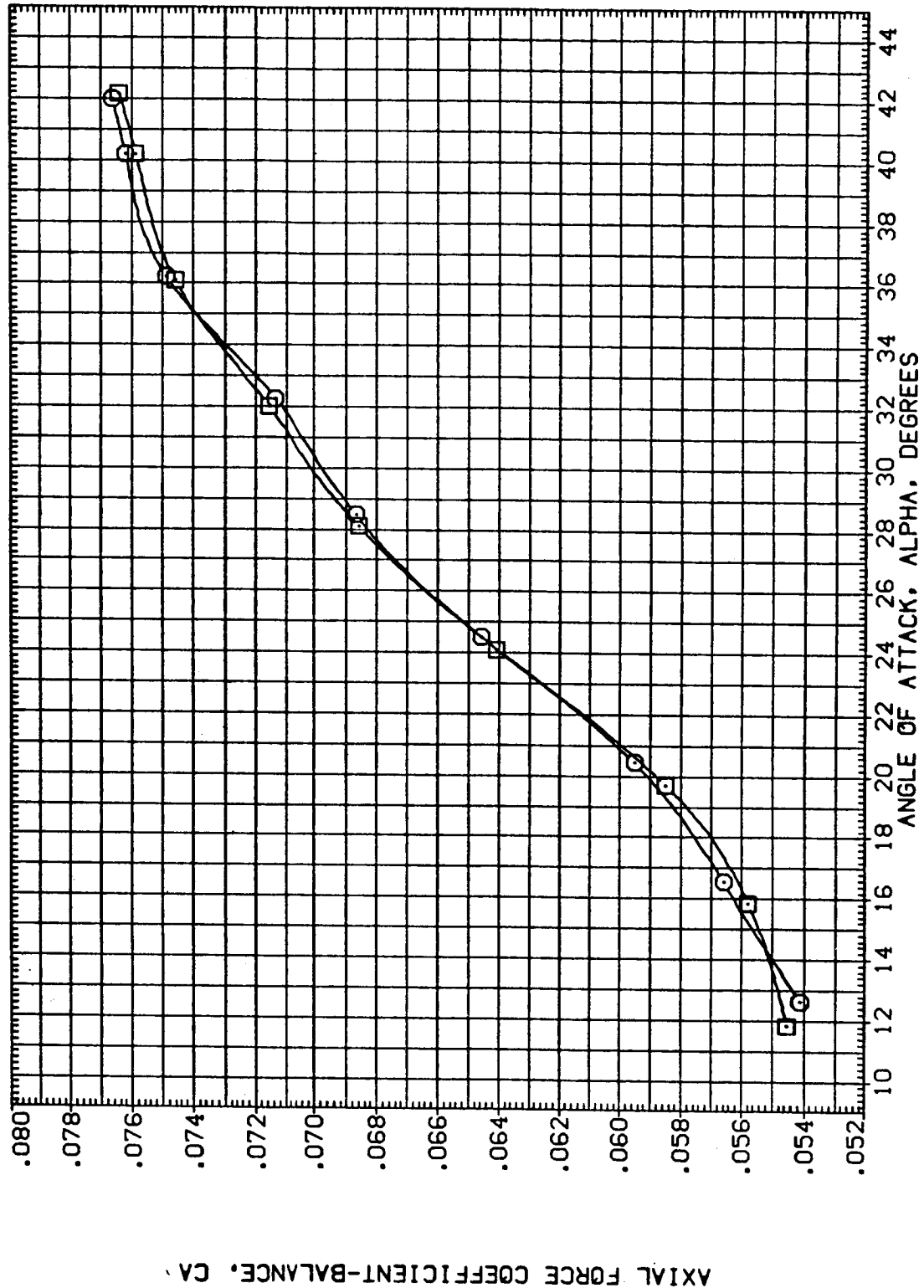


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0005)  
 (CE0021)

CONFIGURATION DESCRIPTION  
 AVES 3.5-190 QAS8 (011-17-114)  
 AVES 3.5-190 QAS8 (011-17-114-124-DUPPY STING)

BETA .000  
 .000

ELEVON .000  
 .000

BOFLAP 16.300  
 16.300

SPOBRK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP 375.0000 IN.Y0  
 ZMRP 0.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFW

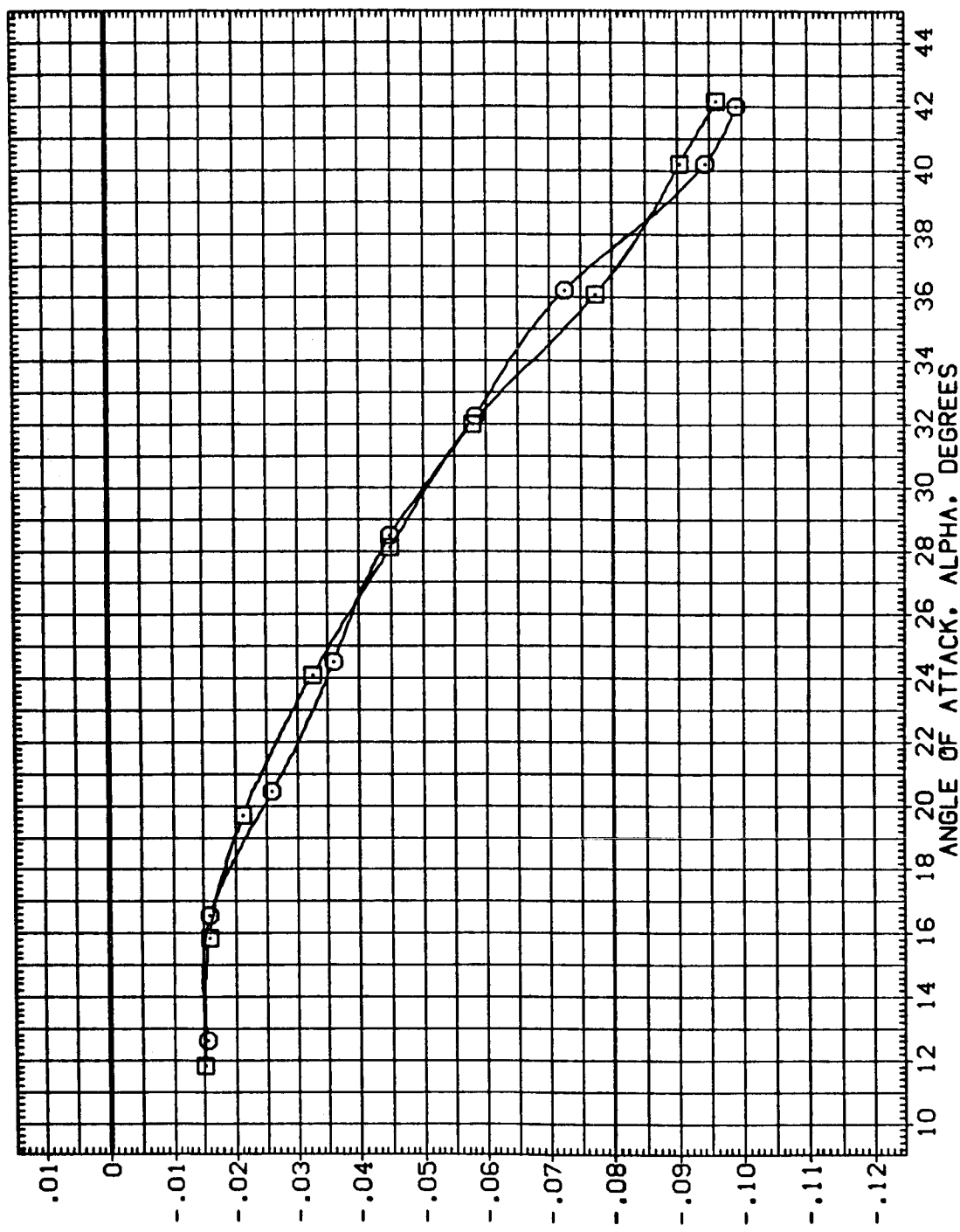


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

C-7

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0005)	AVES 3.5-190 0A98 (011-47-H14)	.000	.000	16.300	55.000	SREF 2690.0000 50.FT.
(CE0021)	AVES 3.5-190 0A98 (011-47-H14-N24-DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

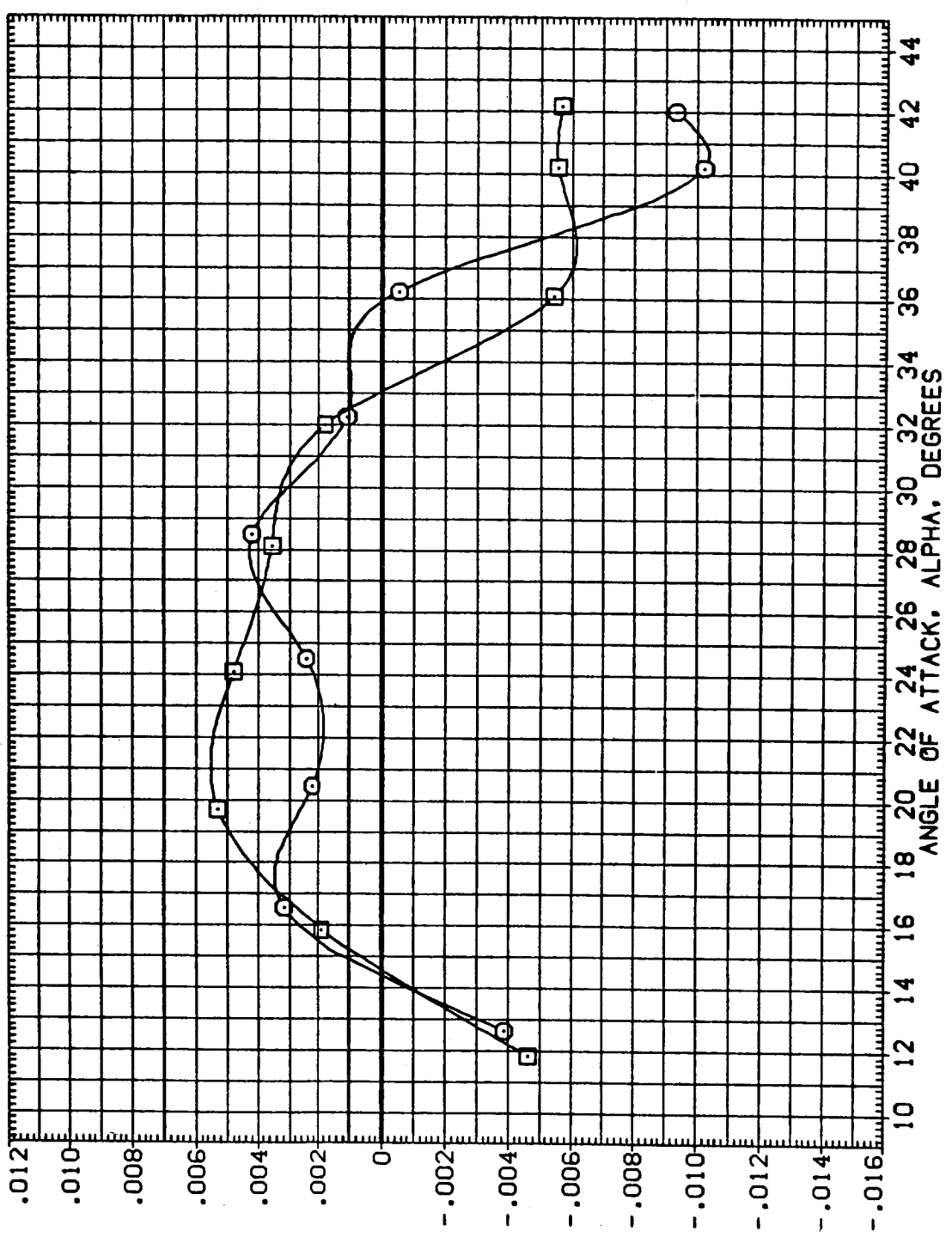


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (CE0005) (CE0021)

CONFIGURATION DESCRIPTION  
 ARES 3.5-190 0A98 (011-17-M14)  
 ARES 3.5-190 0A98 (011-17-M14-N24+JUNNY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 50.FT.  
 LREF 474.6000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

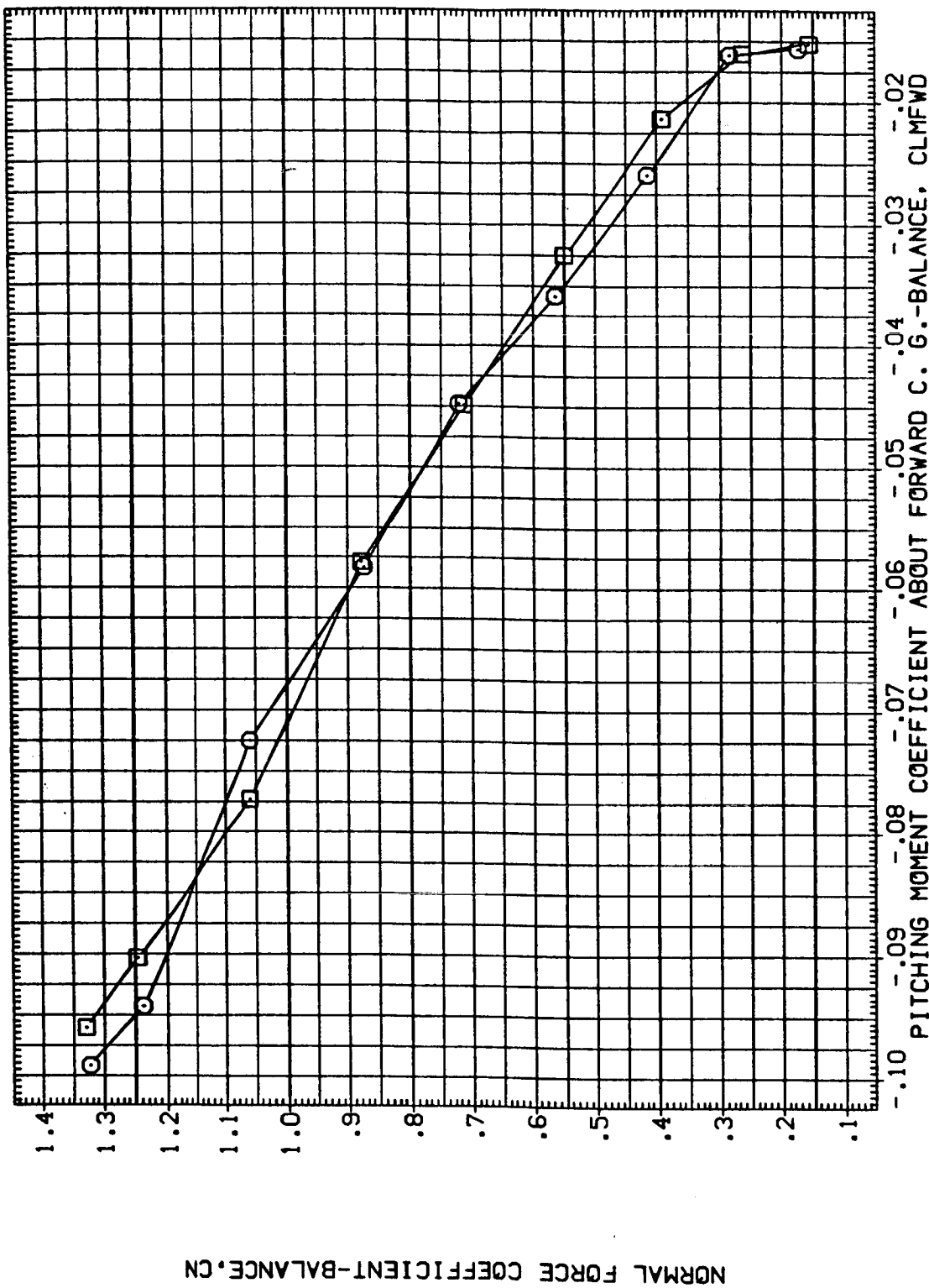


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0005)	AMES 3.5-190 0A98 (011-17+M14)	.000	.000	16.300	55.000	SREF 2690.0000 50.FT.
(CE0021)	AMES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMFP 1076.7000 IN.X0
						YMFP .0000 IN.Y0
						ZMFP 375.0000 IN.Z0
						SCALE .0150

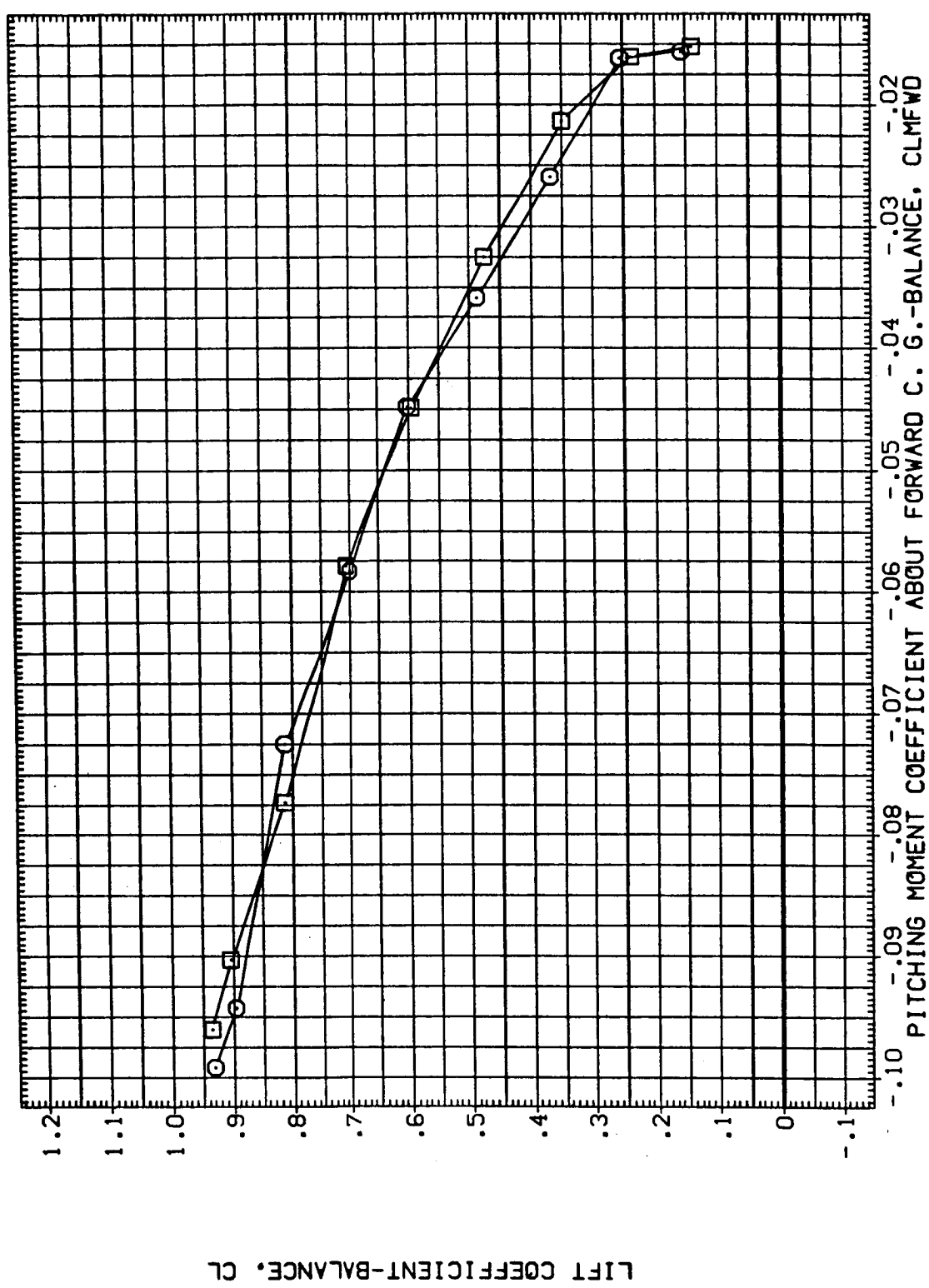


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0005)	AMES 3.5-190 QAS8 (011-17+H14)	.000	.000	16.300	55.000	SREF 2690.0000 SQ.FT.
(CE0021)	AMES 3.5-190 QAS8 (011-17+H14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

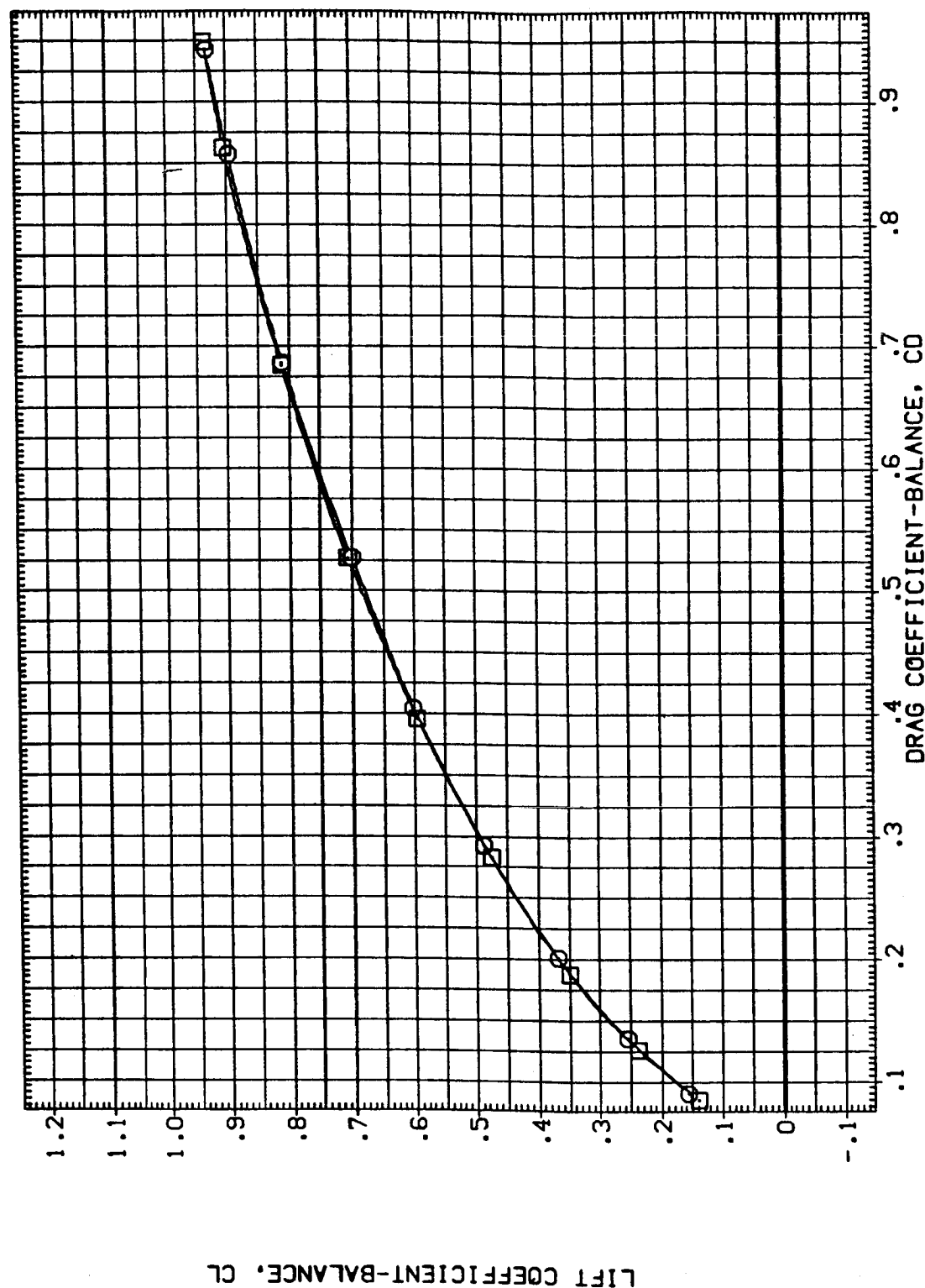


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



NORMAL FORCE COEFFICIENT-TOTAL, CN1

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0005)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	16.300	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.6000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

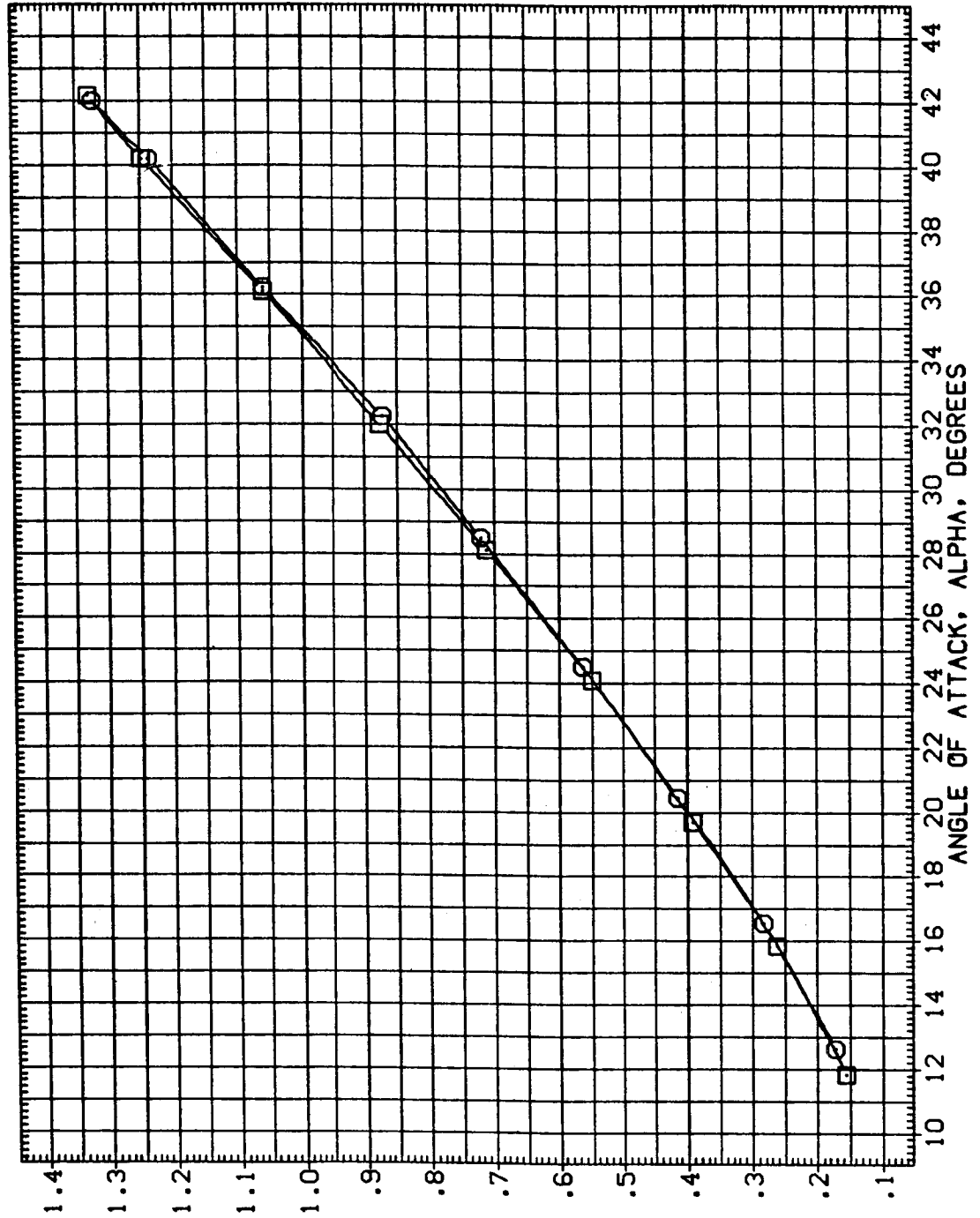


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0005)  
 (EE0021)

CONFIGURATION DESCRIPTION  
 AVES 3.5-190 0A98 (011-47+H14)  
 AVES 3.5-190 0A98 (011-47+H14-4024+DUPPY STING)

BETA .000  
 ELEVON .000  
 BOFLAP 16.300  
 SPOBRK 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

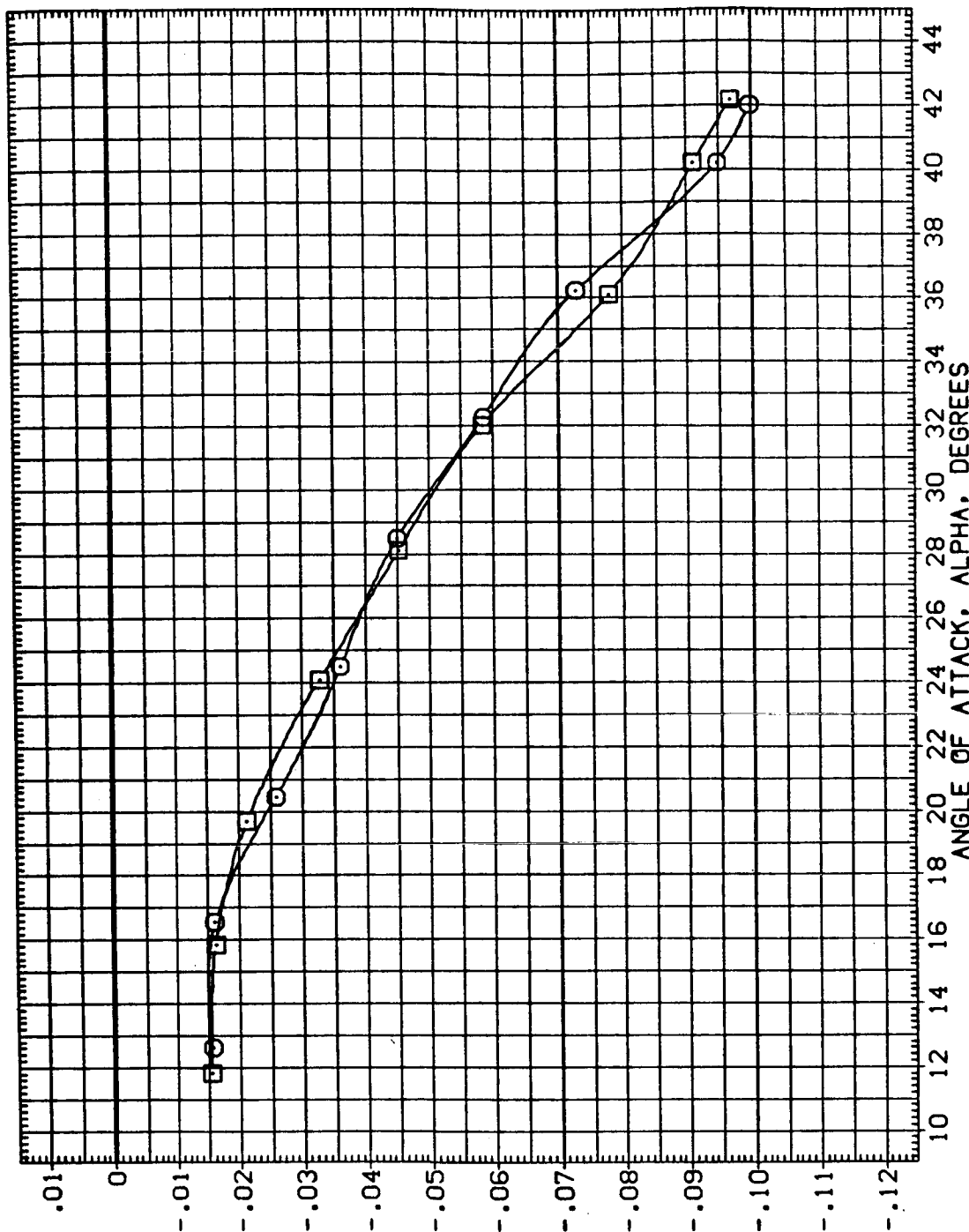


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0005)	AVES 3.5-190 0A98 (011-47+H14)	.000	.000	16.300	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	AVES 3.5-190 0A98 (011-47+H14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						SREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

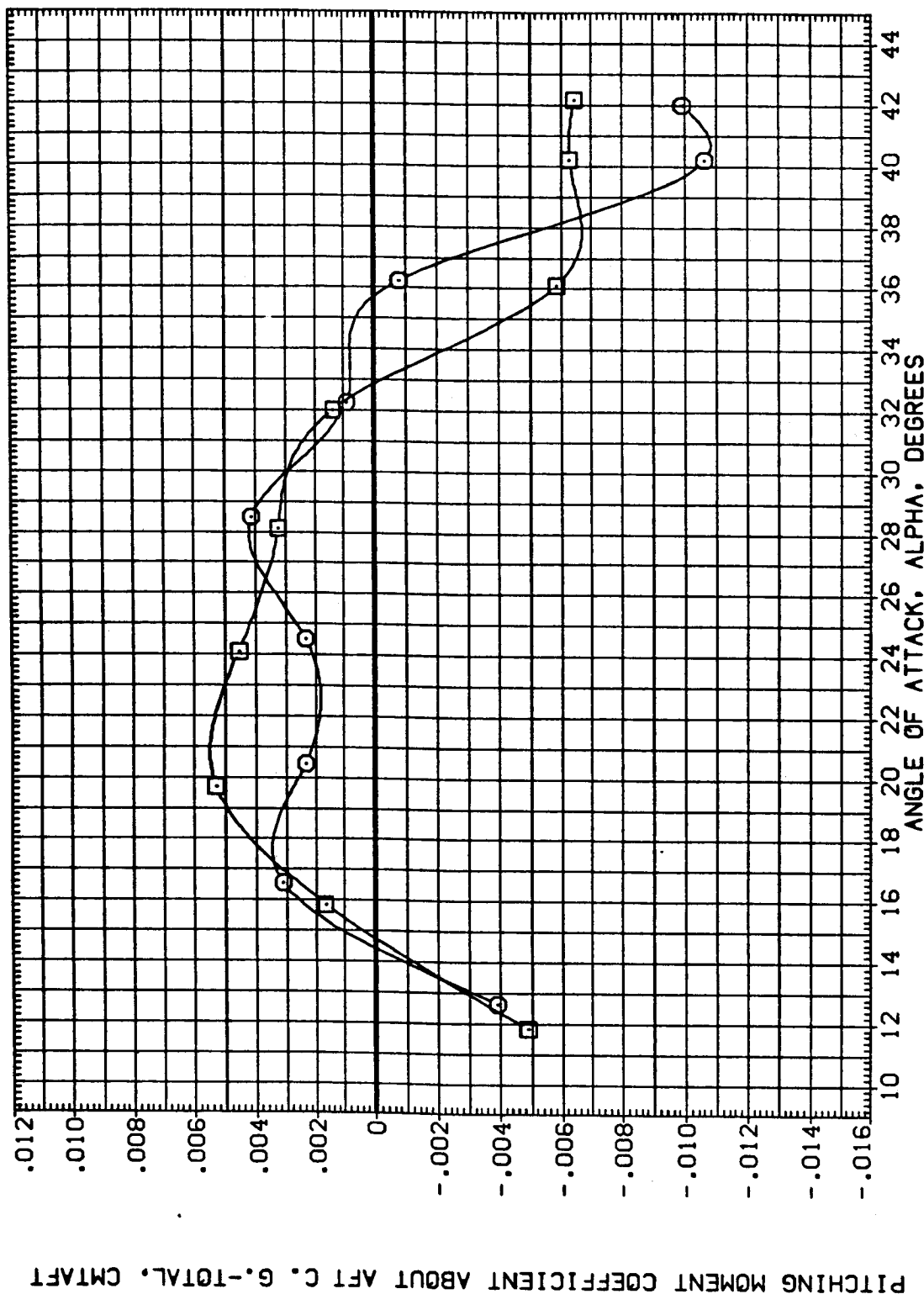


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0005) (EE0021)

CONFIGURATION DESCRIPTION  
 ARES 3.5-190 0A98 (011-M7+M14)  
 ARES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA .000  
 .000  
 .000

ELEVON .000  
 .000  
 .000

BOFLAP 16.300  
 16.300  
 16.300

SPOBRK 55.000  
 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 50. FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN. X0  
 YMRP .0000 IN. Y0  
 ZMRP 375.0000 IN. Z0  
 SCALE .0150

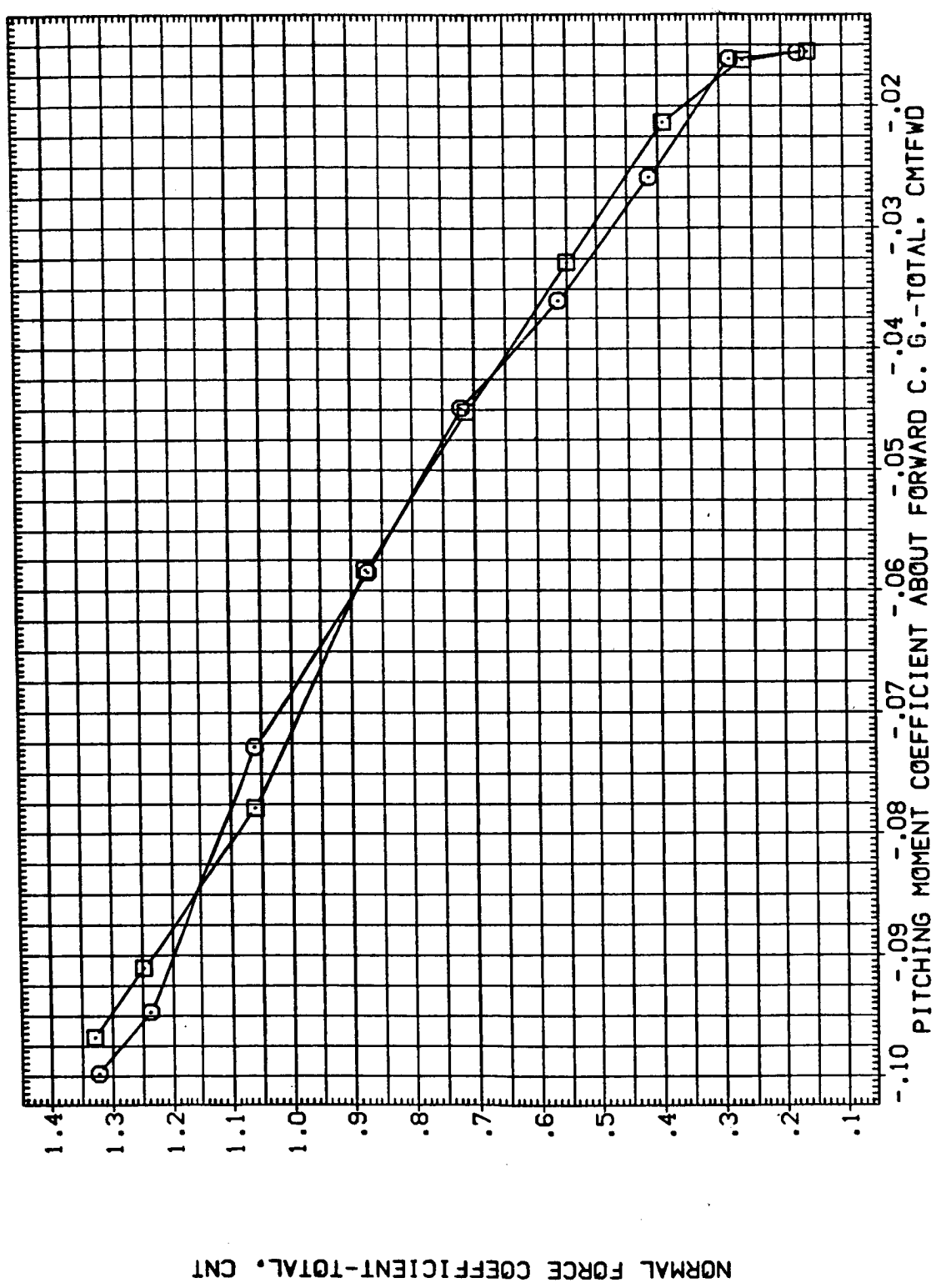


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EE0005)	AMES 3.5-190 OA98 (011-17-M14)	.000	.000	16.300	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	AMES 3.5-190 OA98 (011-17-M14-N24+JUNNY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XS
						YMRP .0000 IN.YS
						ZMRP 375.0000 IN.ZS
						SCALE .0150

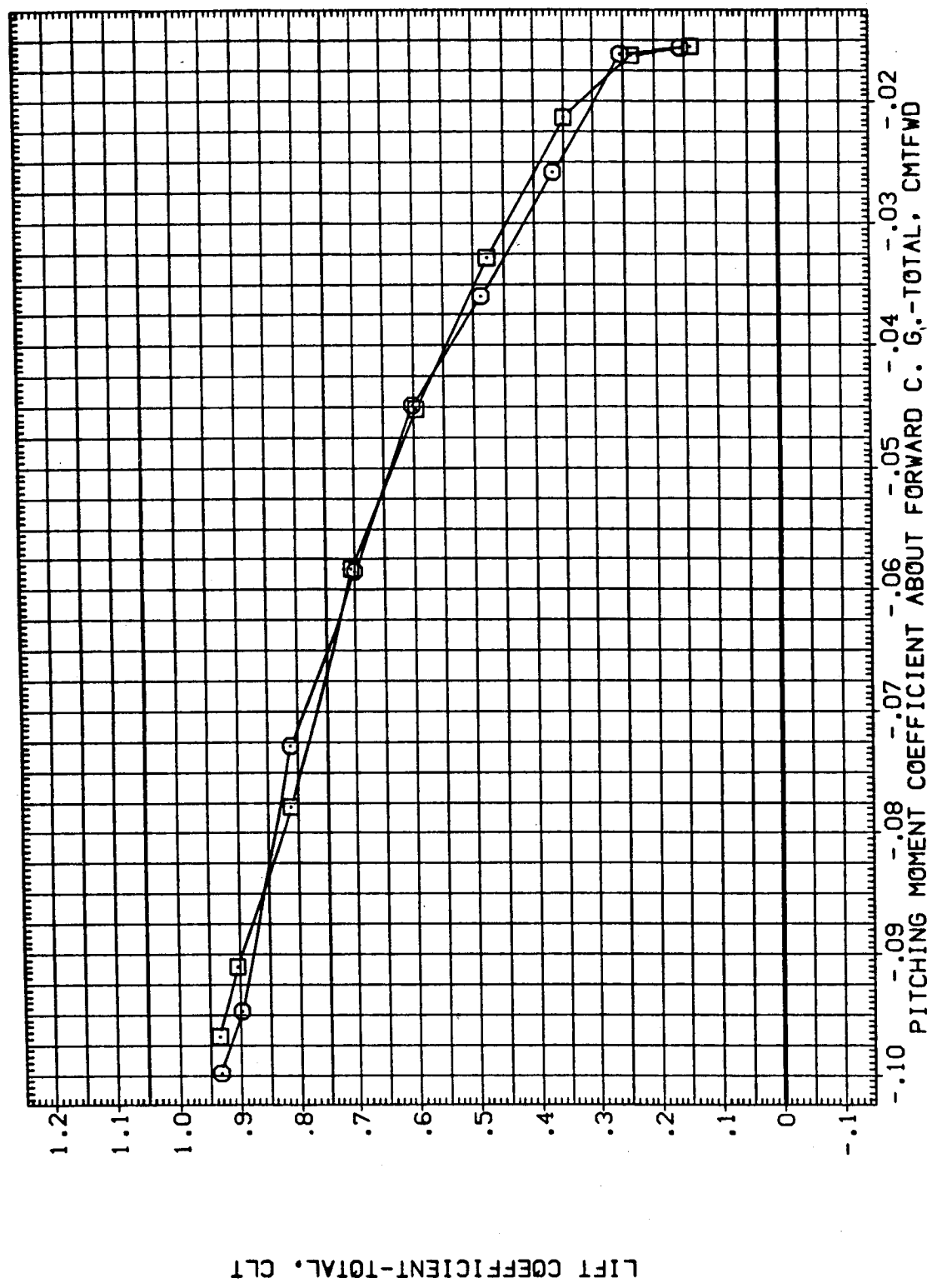


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL  
(EE0005)  
(EE0021)

CONFIGURATION DESCRIPTION  
AMES 3.5-190 DA98 (011-47+H14)  
AMES 3.5-190 DA98 (011-47+H14-N24+DUMMY STING)

BETA  
.000  
.000

ELEVON  
.000  
.000

BOFLAP  
16.300  
16.300

SPDRK  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 50.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

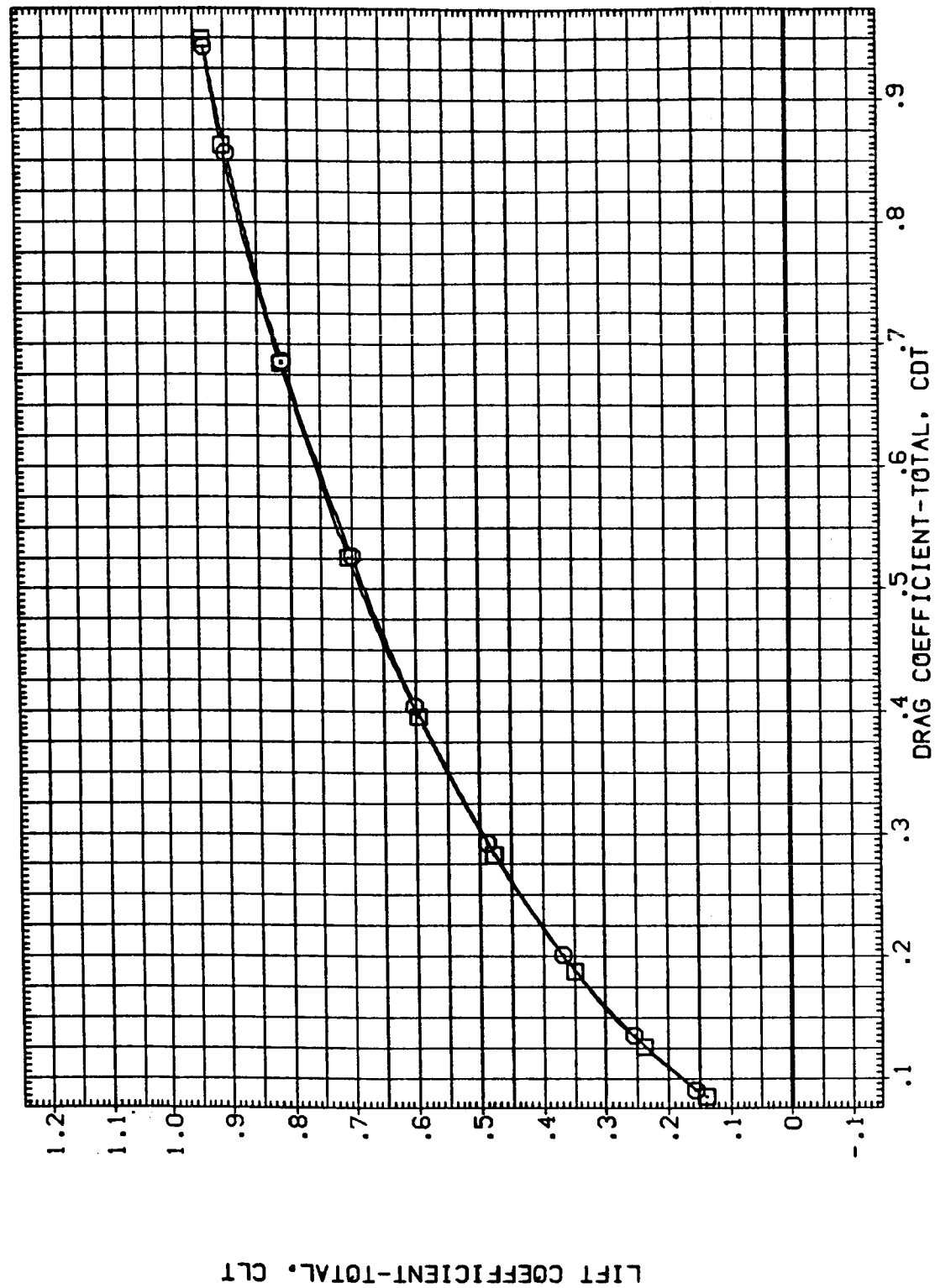


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(EE0005)	AMES 3.5-190 GA98 (011-H7-H14)	.000	.000	16.300	55.000	SREF	2690.0000
(EE0021)	AMES 3.5-190 GA98 (011-H7-H14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF	474.8000
						BREF	936.6800
						XMRP	1076.7000
						YMRP	.0000
						ZMRP	375.0000
						SCALE	.0150
							50.FT.
							IN.
							IN.
							IN.X0
							IN.Y0
							IN.Z0

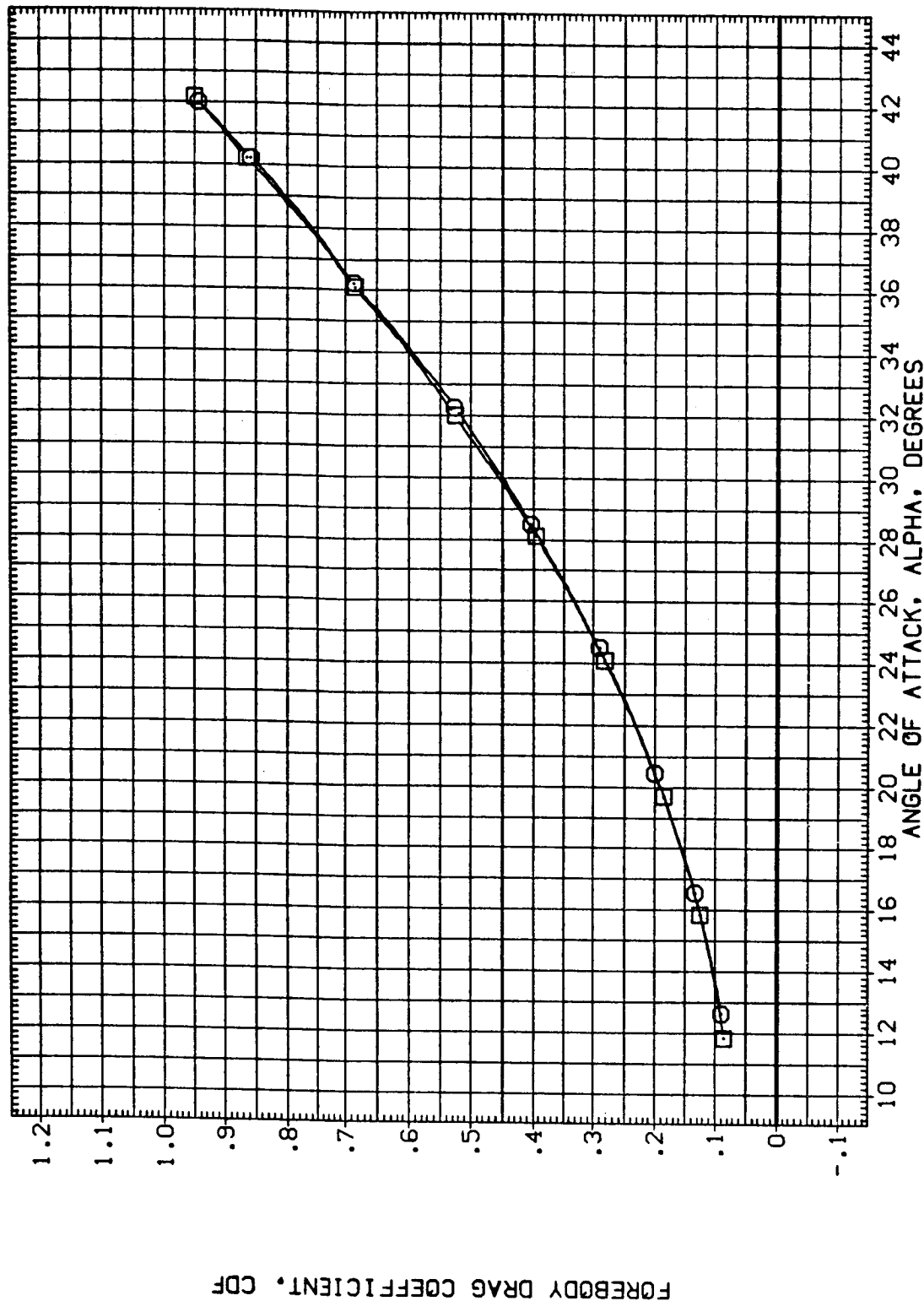


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0005)	AMES 3.5-190 BA98 (011-M7+M14)	.000	.000	16.300	55.000	SREF 2690.0000 50.FT.
(EE0021)	AMES 3.5-190 BA98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

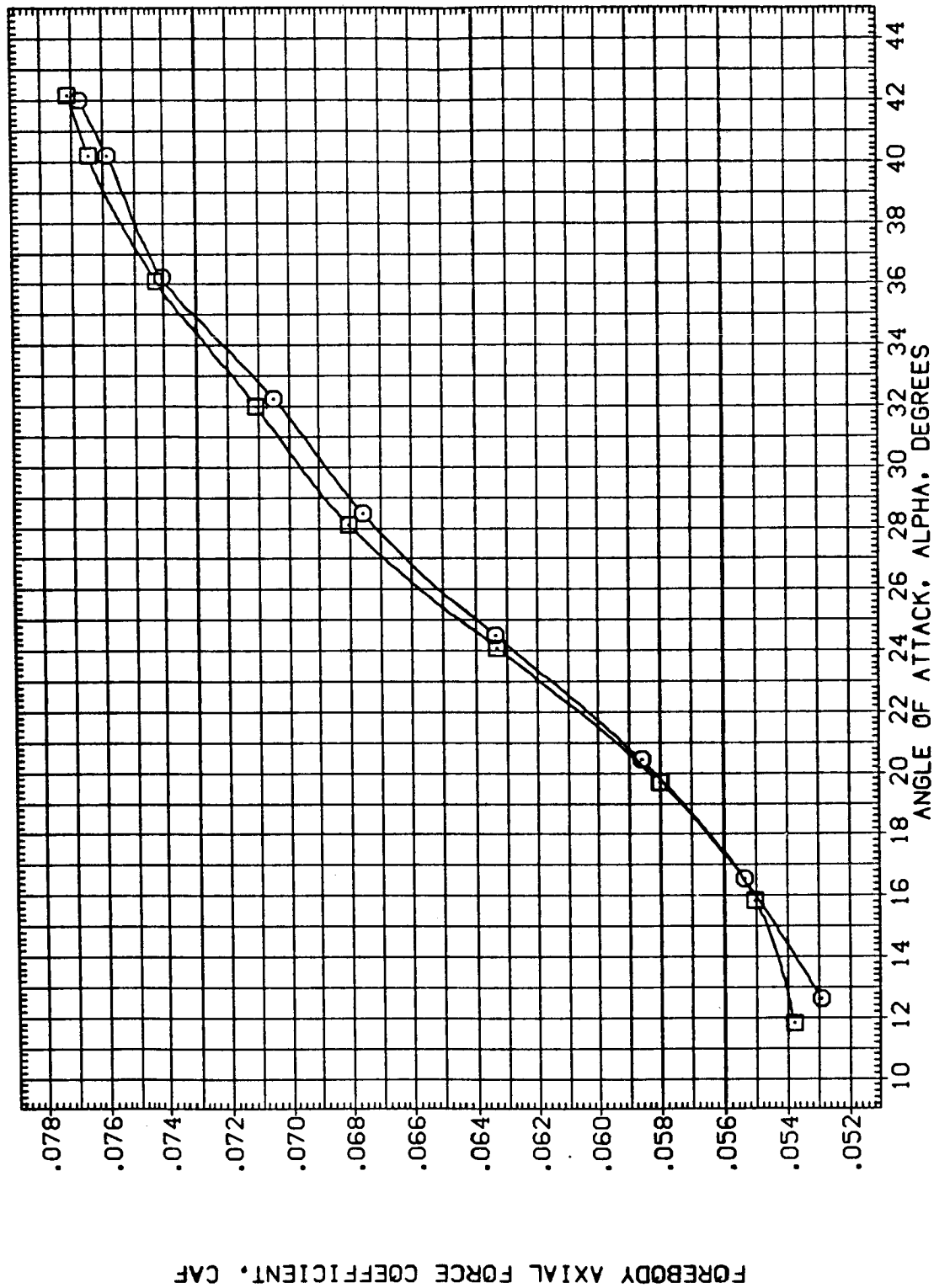


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0005)	AMES 3.5-190 OA98 (011-M7-M14)	.000	.000	16.300	55.000	SREF 2690.0000 SQ.FT.
(EE0021)	AMES 3.5-190 OA98 (011-M7-M14-N24-DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XG
						YMRP .0000 IN.YG
						ZMRP .0000 IN.ZG
						SCALE .0150

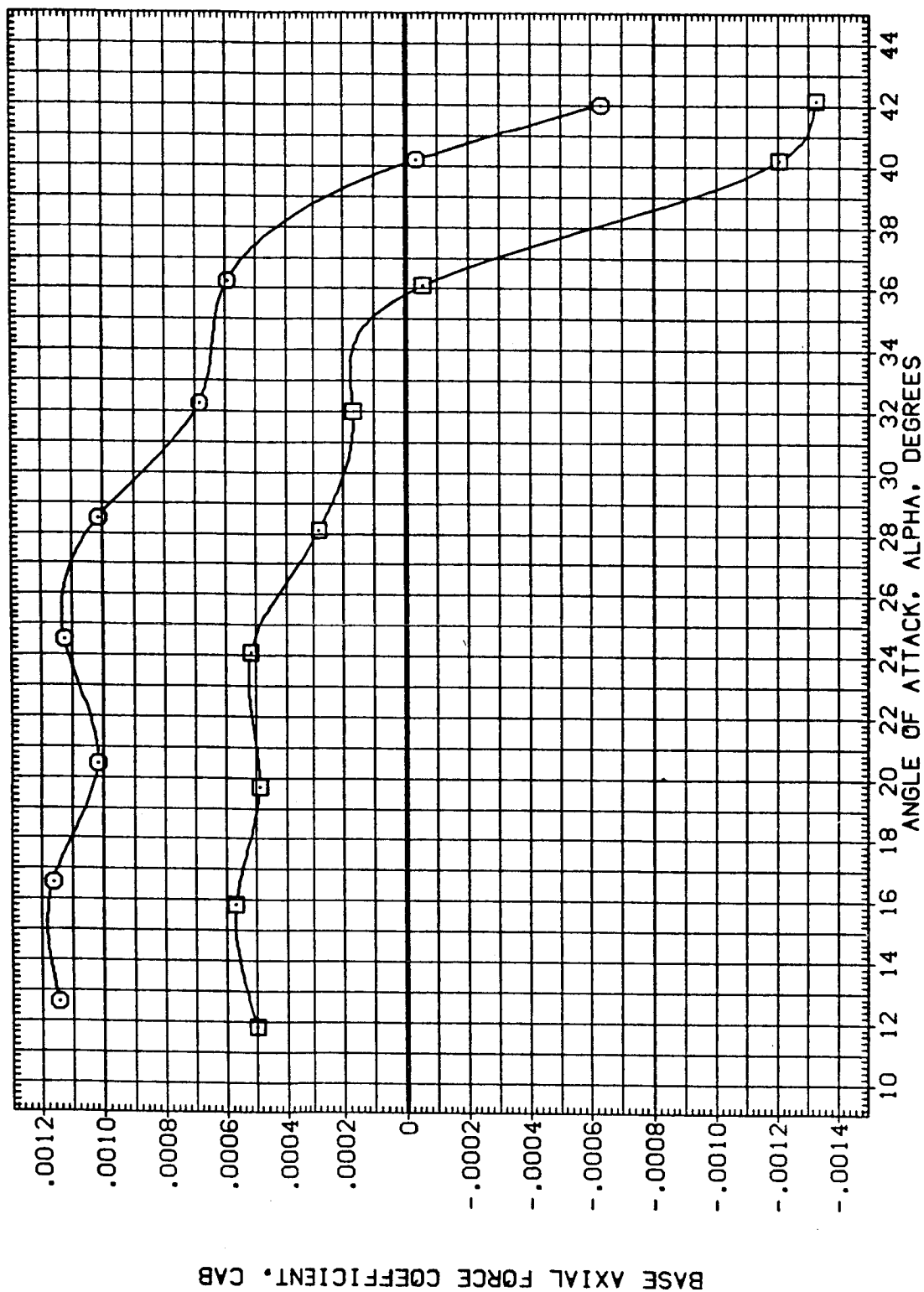


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BEQ005)	AMES 3.5-190 0A98 (011-17-M14)	.000	.000	16.300	55.000	SREF 2690.0000 SQ.FT.
(BEQ021)	AMES 3.5-190 0A98 (011-17-M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.X0
						YMRP 1076.7000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

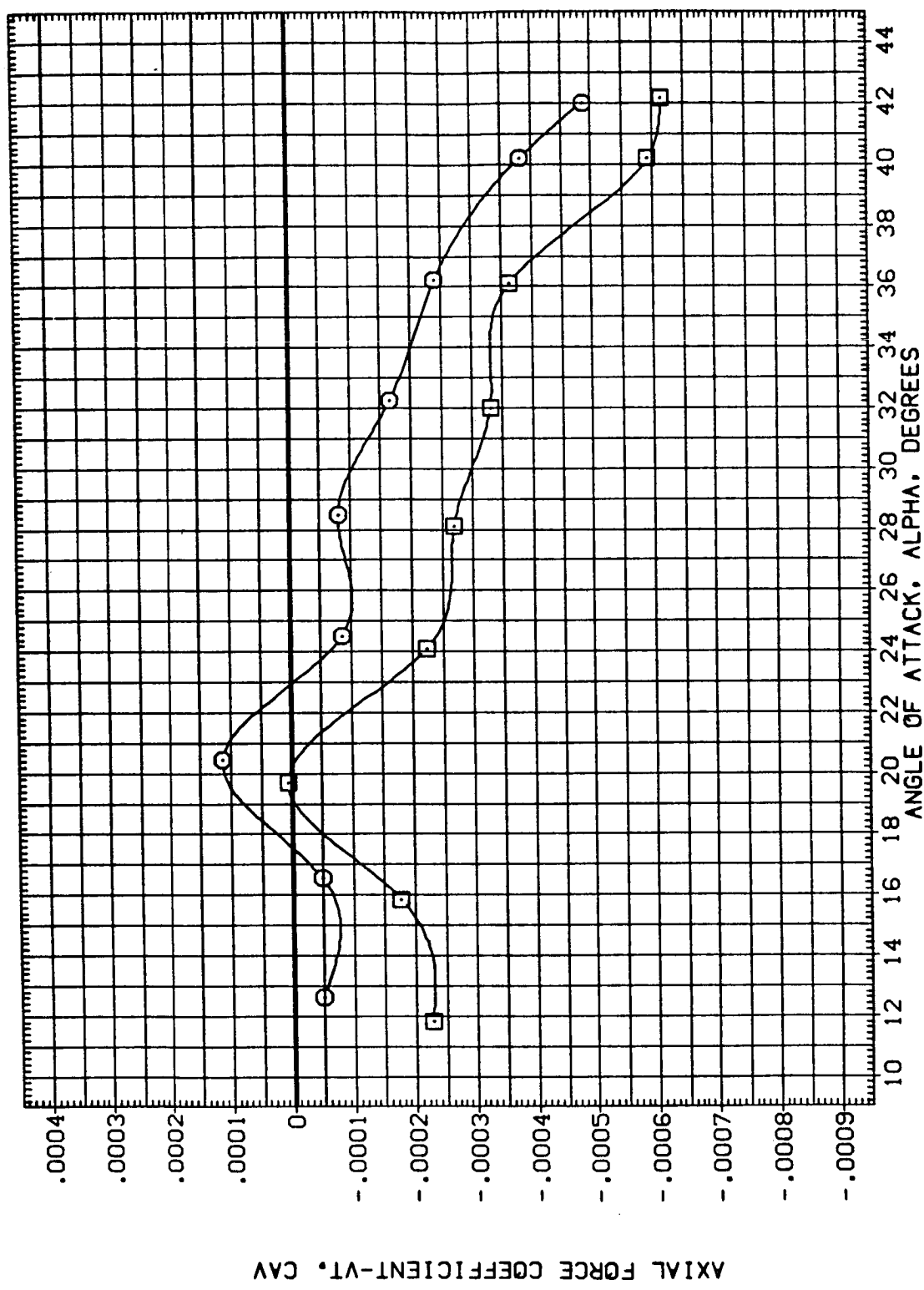



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (BEQ005) (BEQ021)  CONFIGURATION DESCRIPTION  
 AYES 3.5-190 QAS8 (011-M7-M14)  
 AYES 3.5-190 QAS8 (011-M7-M14-N24-DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP 16.300 16.300

SPOBRK 55.000 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

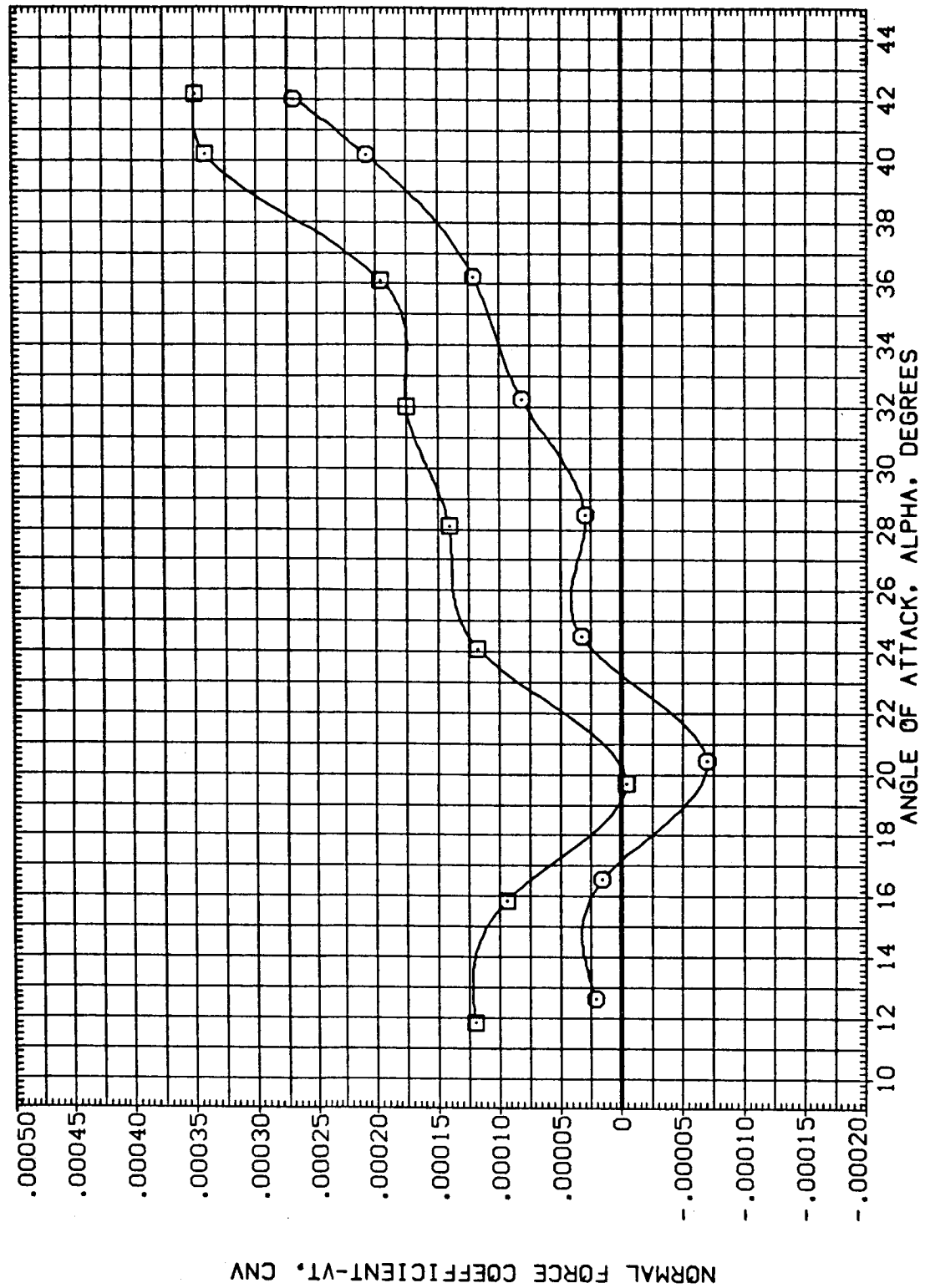


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (8E0005)  
 (8E0021)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-M7+M14)  
 AMES 3.5-190 0A98 (011-M7+M14-A24+DUMMY STING)

BETA .000  
 .000

ELEVON .000  
 .000

BOFLAP 16.300  
 16.300

SPDRBK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.XB  
 YMRP .0000 IN.YB  
 ZMRP 375.0000 IN.ZB  
 SCALE .0150

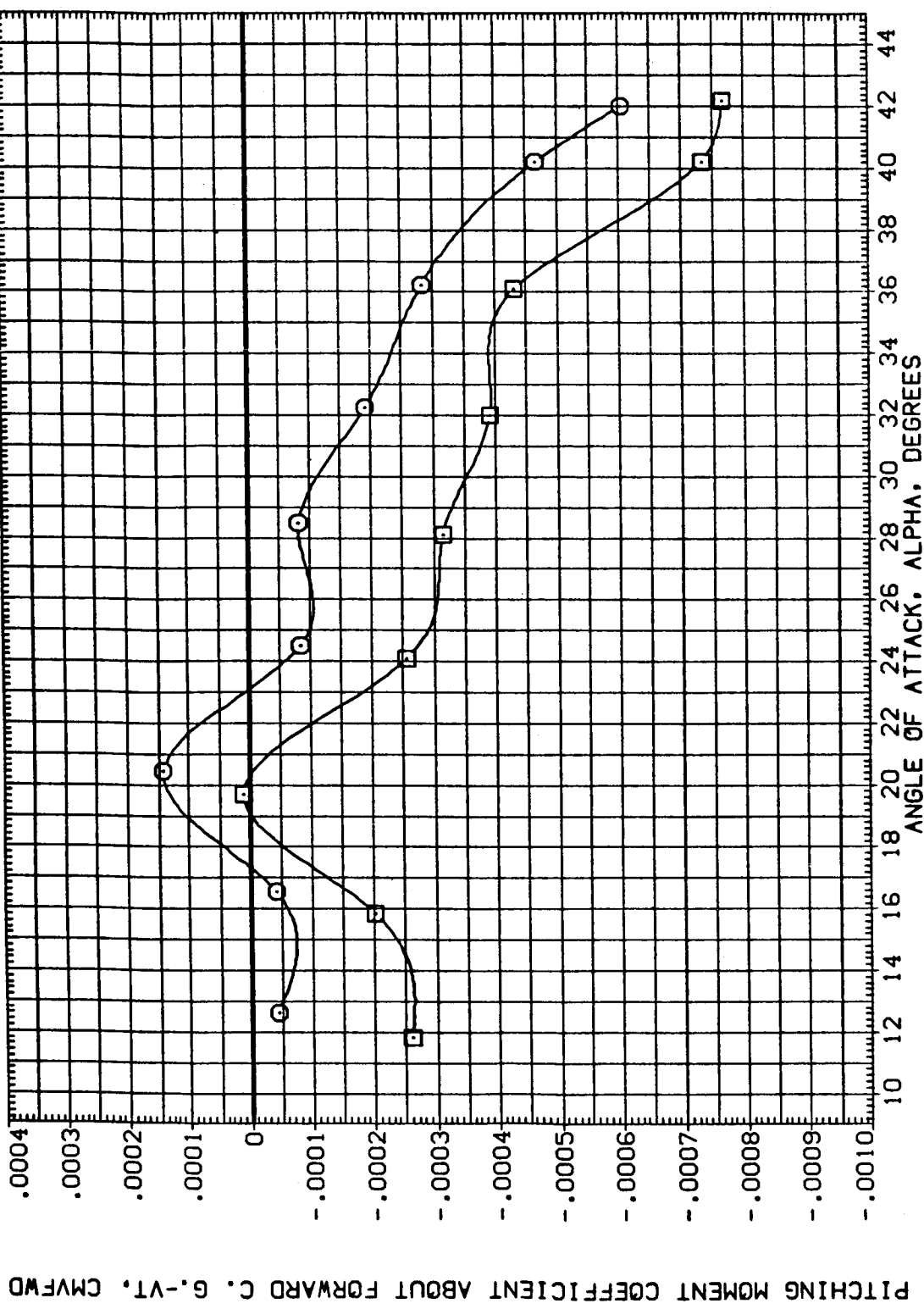


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SP06RK	REFERENCE INFORMATION
(BE0005)	AVES 3.5-190 DAS8 (011-H7+M14)	.000	.000	16.300	55.000	SREF 2690.0000 SQ.FT.
(BE0021)	AVES 3.5-190 DAS8 (011-H7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP 375.0000 IN.X0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

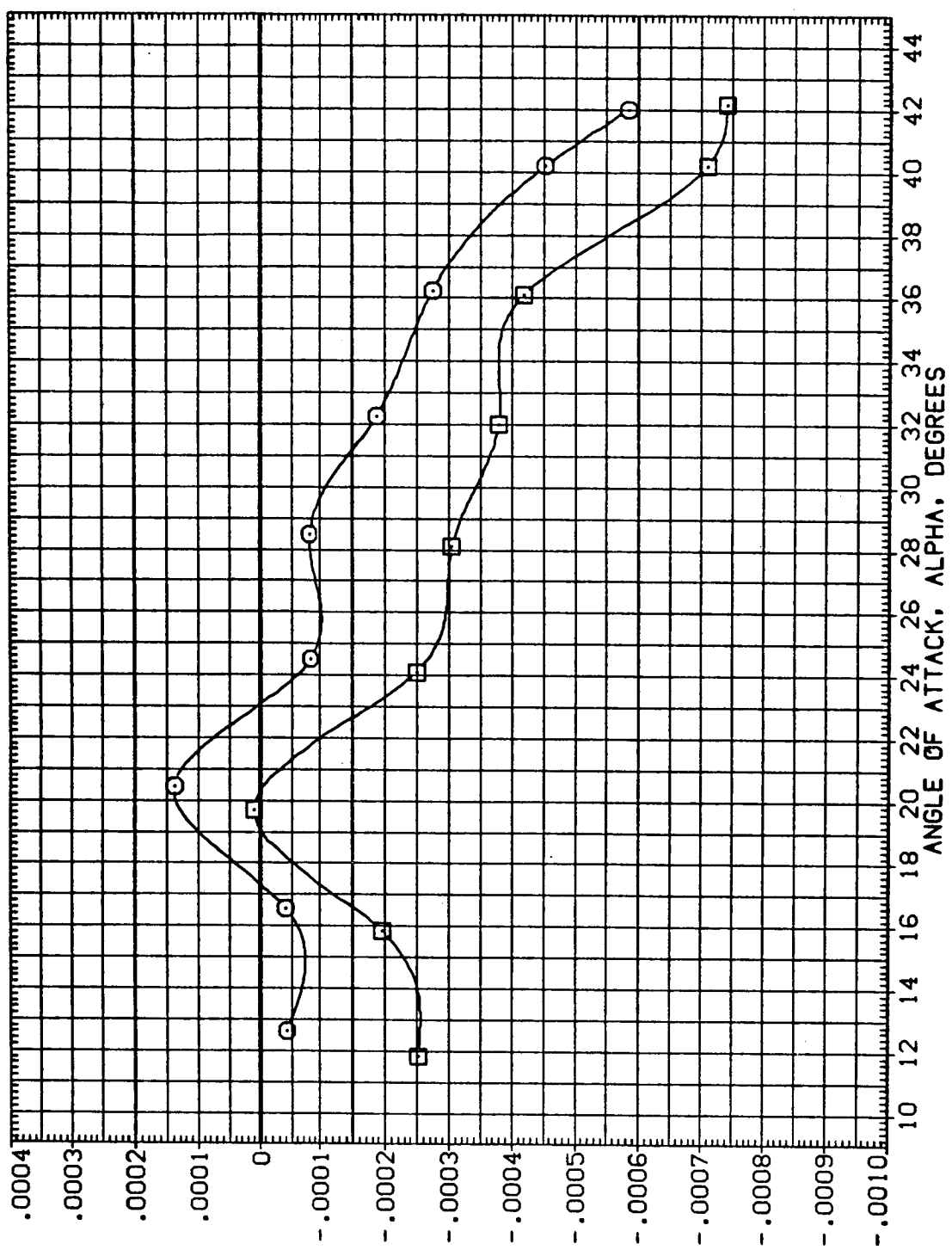


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0021)

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PARAMETRIC VALUES  
 BETA .000 ELEVON .000  
 BOFLAP 16.300 SPOBRK 55.000  
 RUDDER .000

MACH 10.300  
 SYMBOL O

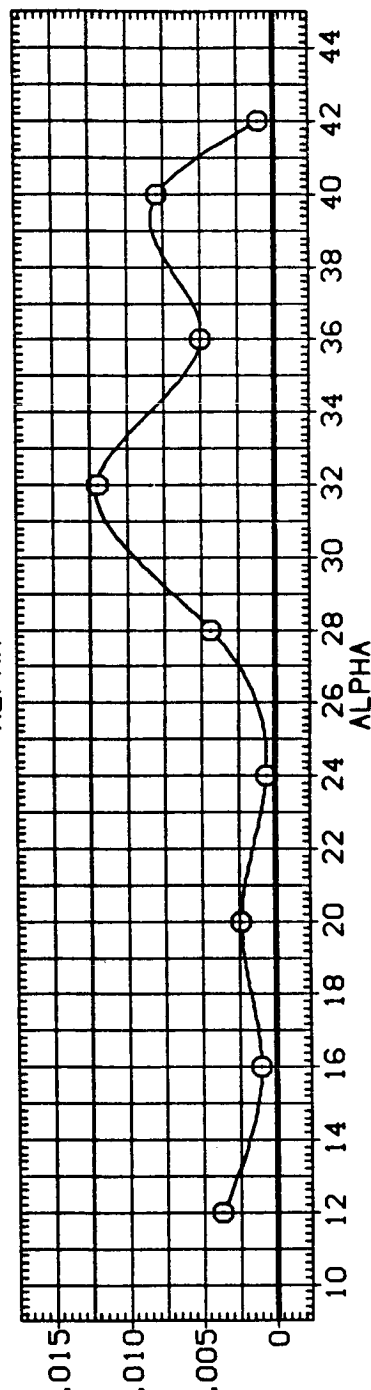
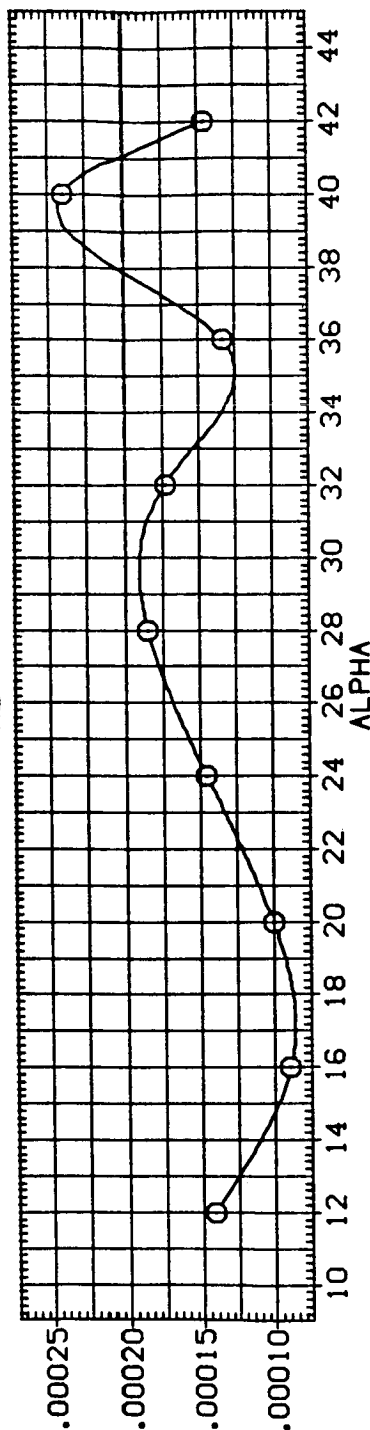
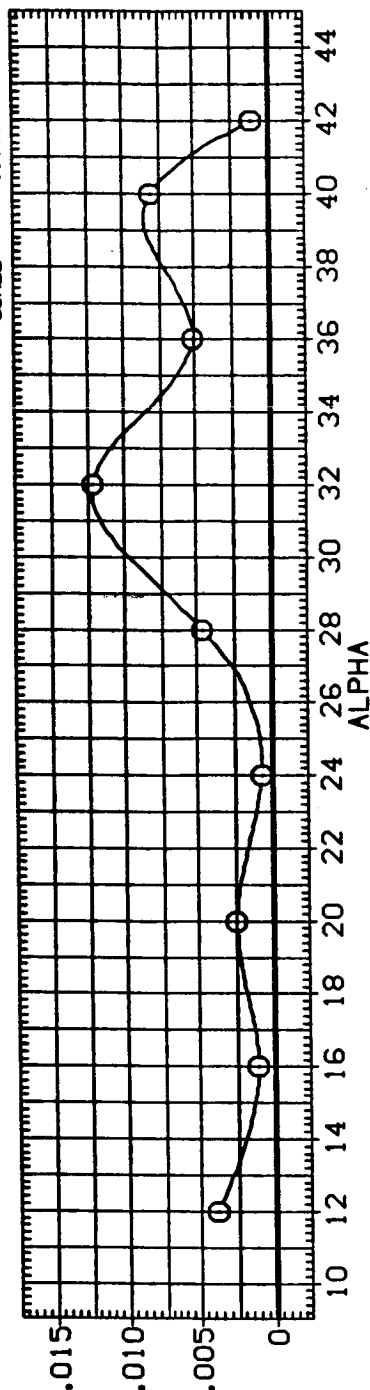


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZEQ021)

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON	SPDRK	SREF	LREF	SQ.FT.
○	10.300	.000	.000	.000	2690.0000	474.8000	IN.
		80FLAP	18.300	55.000	936.6900	1076.7000	IN.
		RUDDER	.000		375.0000	375.0000	IN.
					SCALE	.0150	IN.

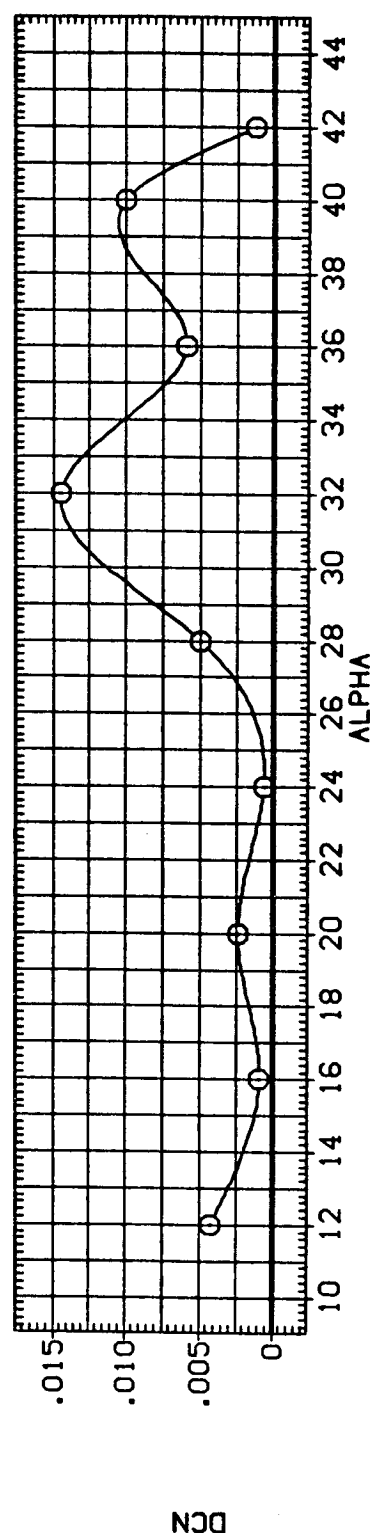
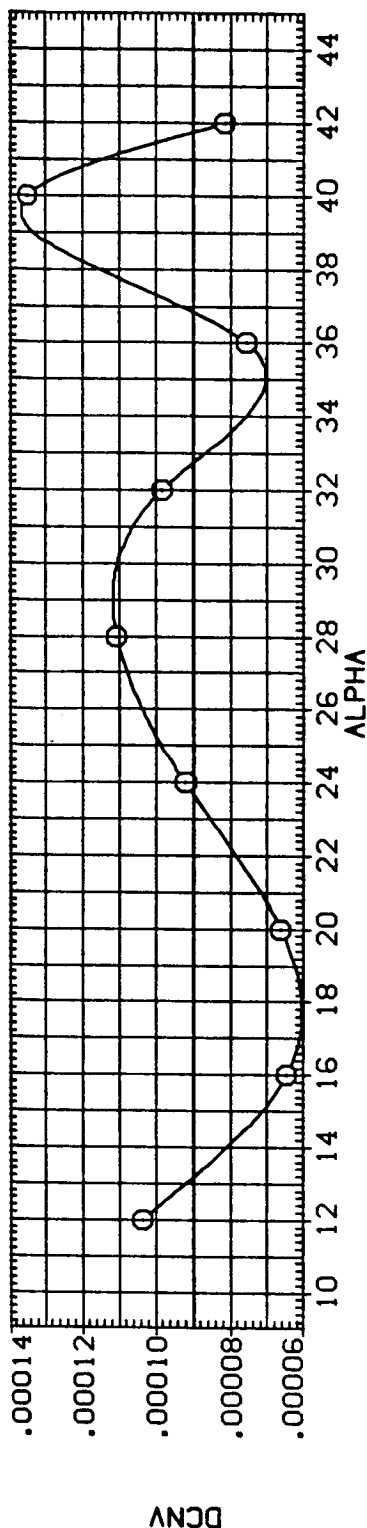
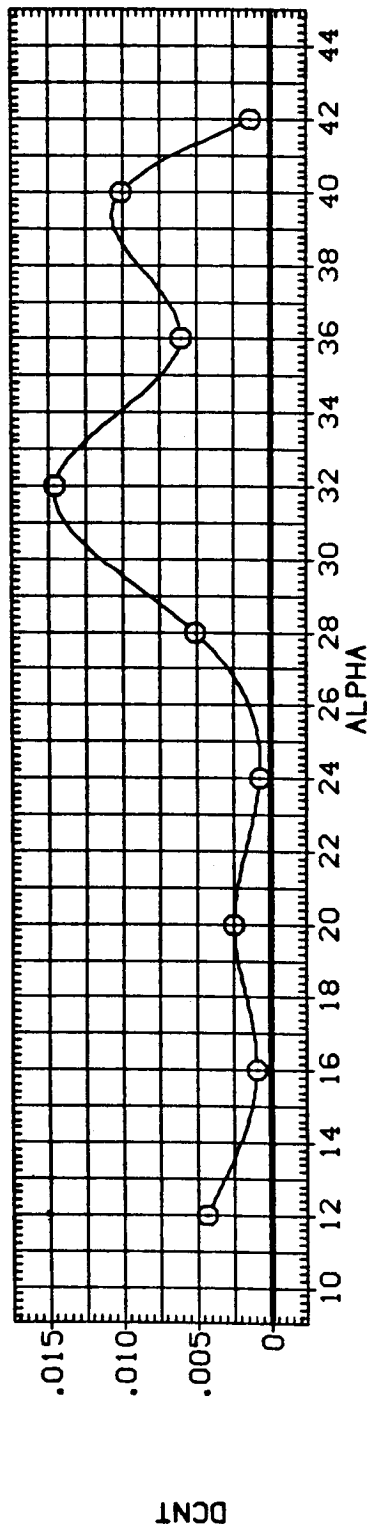


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PARAMETRIC VALUES  
 BETA .000 ELEVON .000  
 BOFLAP 16.300 SPOBRK 55.000  
 RUDDER .000

SYMBOL MACH  
 O 10.300

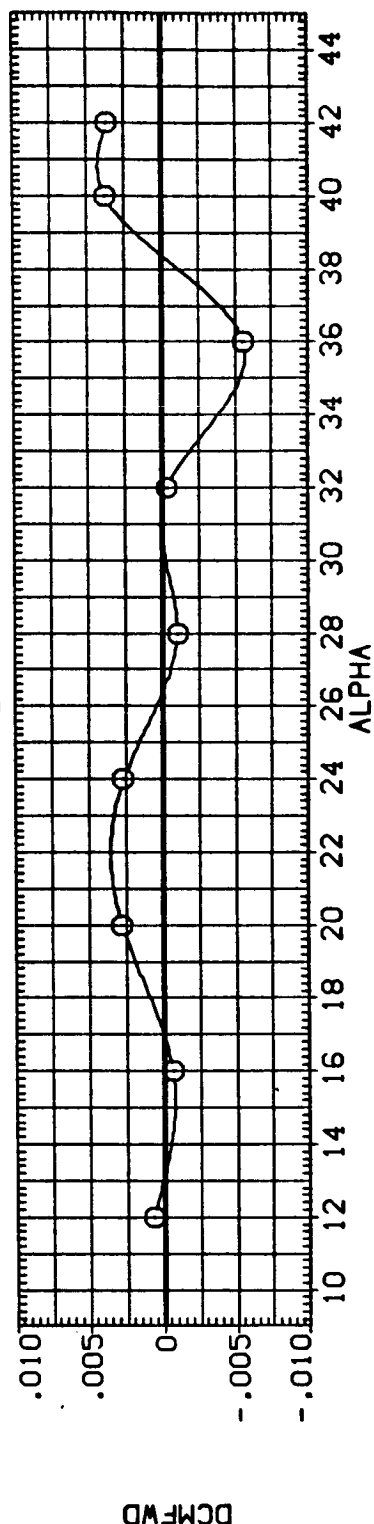
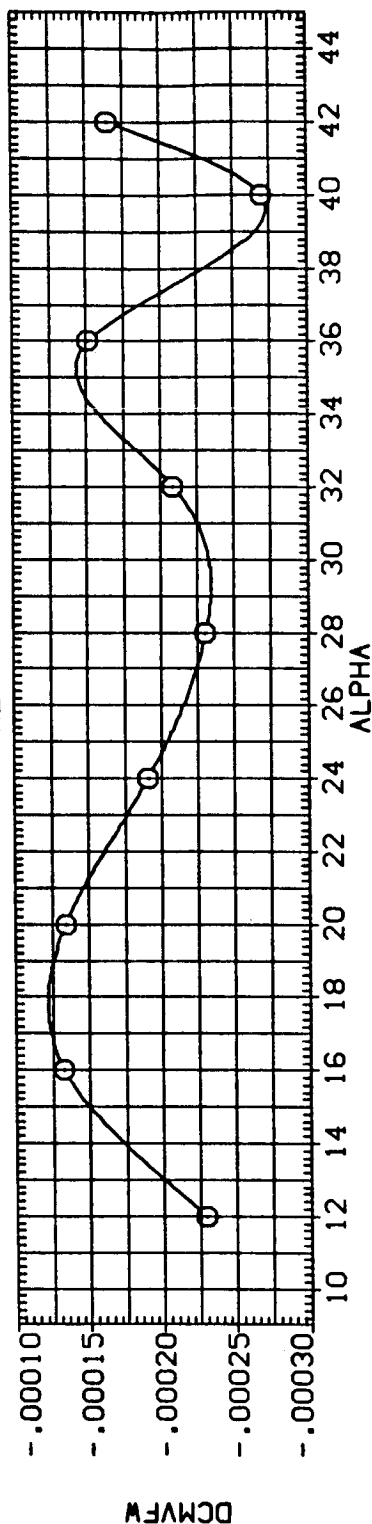
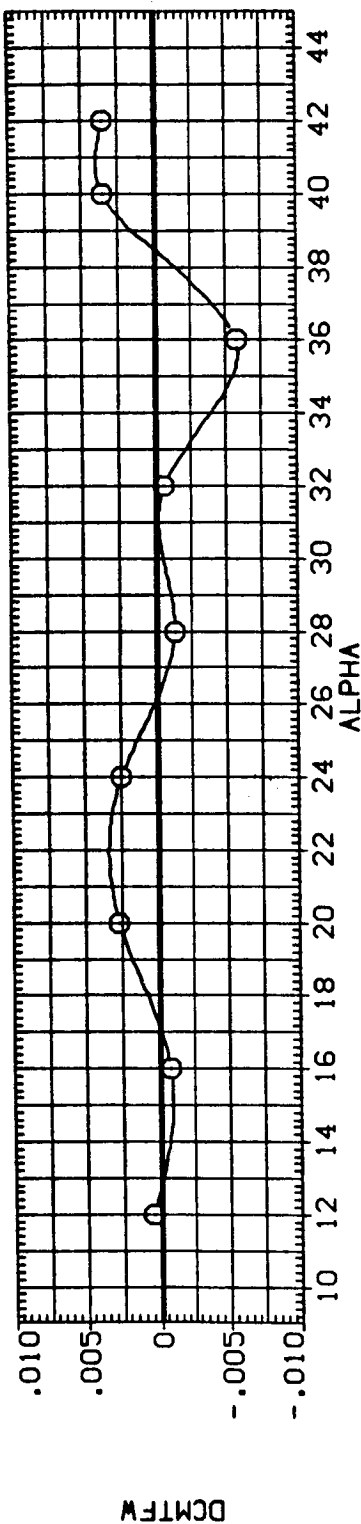


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
O	10.300	BETA	SREF 2690.0000 SQ.FT.
		BOFLAP	LREF 474.8000 IN.
		RUDDER	BREF 936.6800 IN.
			XMRP 1076.7000 IN.XB
			YMRP .0000 IN.YB
			ZMRP 375.0000 IN.ZB
	SCALE .0150		

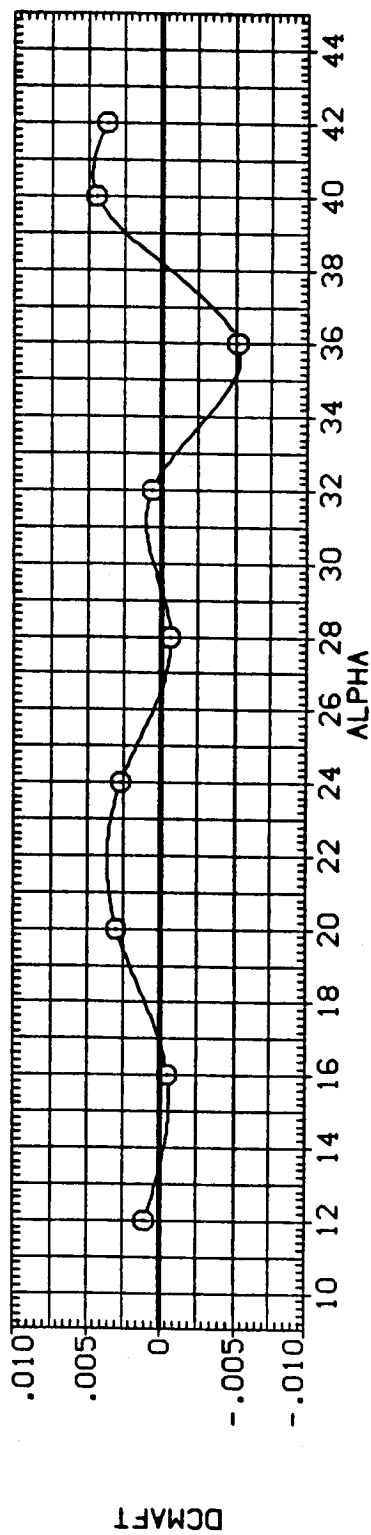
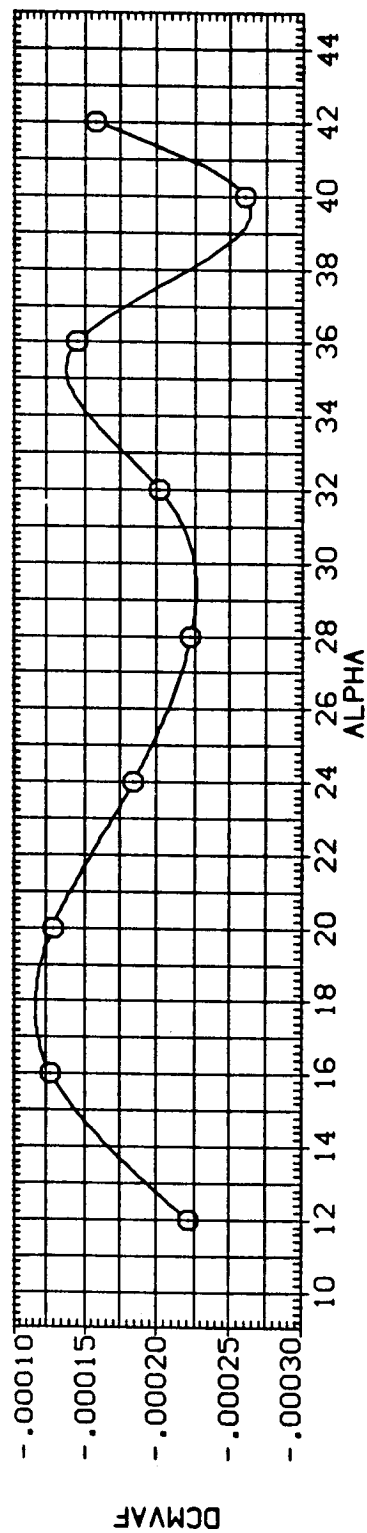
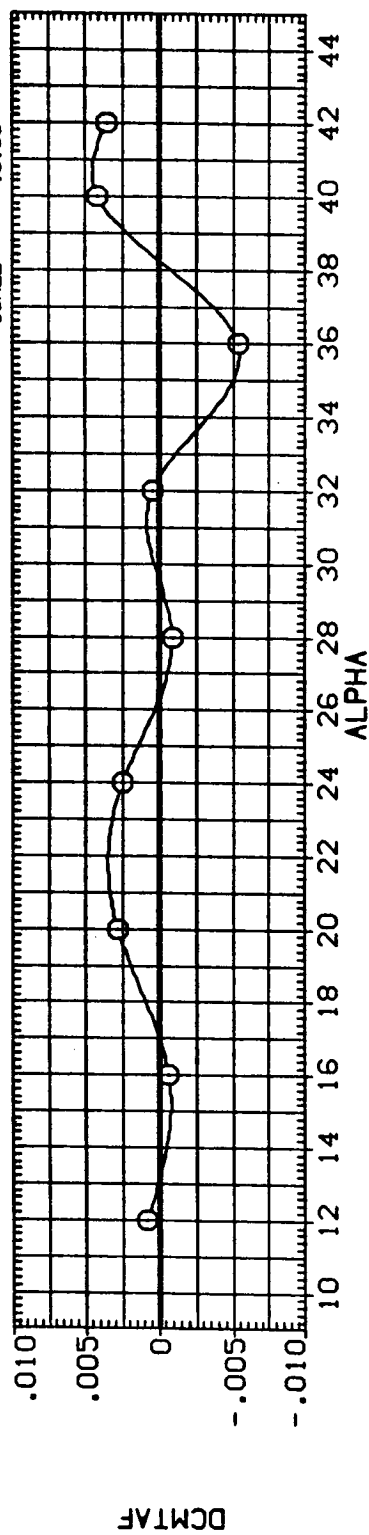


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL MACH 10.300  
O

PARAMETRIC VALUES  
BETA .000 ELEVON .000  
BOFLAP 16.300 SPOBRK 55.000  
RUDDER .000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.XB  
YMRP .0000 IN.YB  
ZMRP 375.0000 IN.ZB  
SCALE .0150

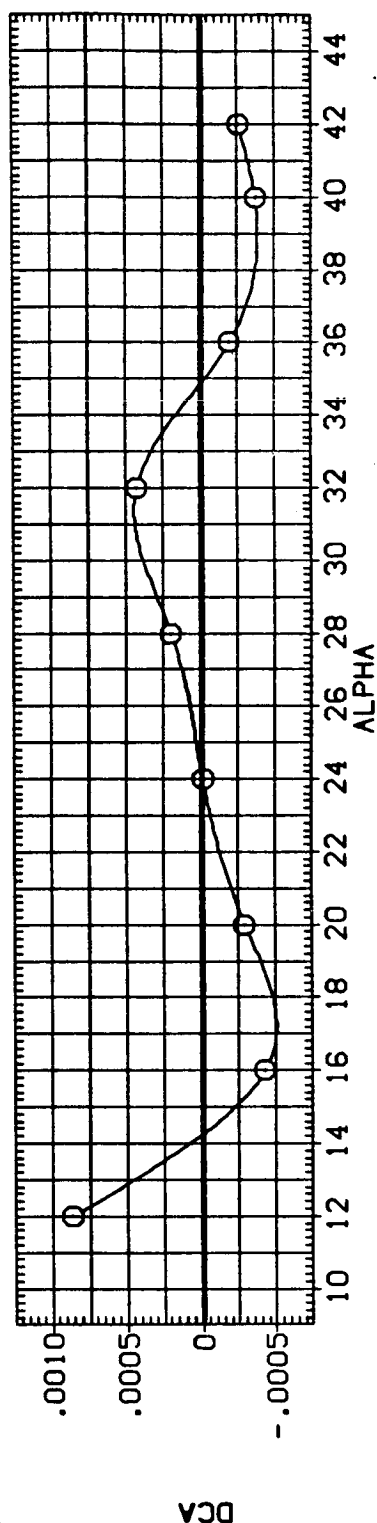
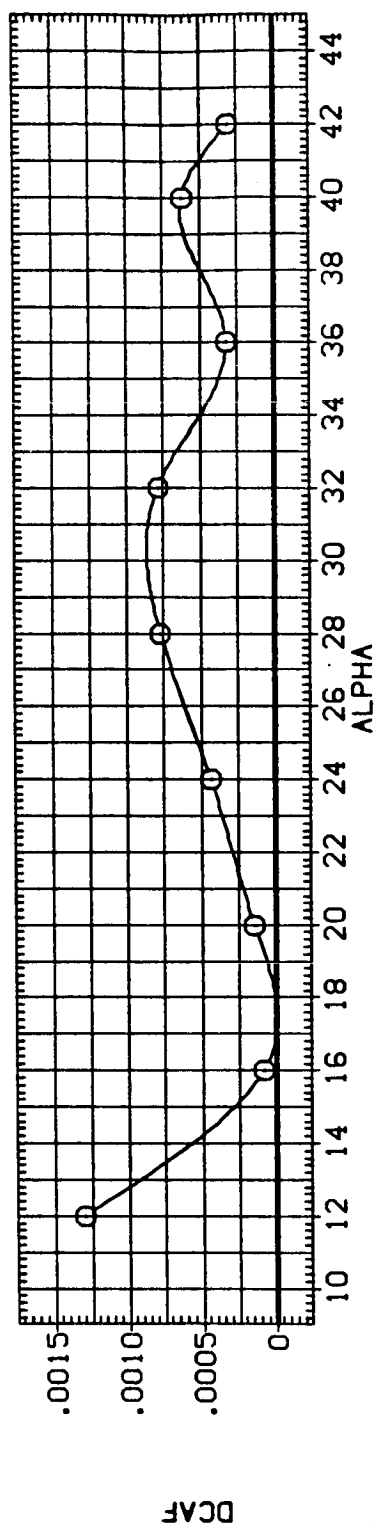
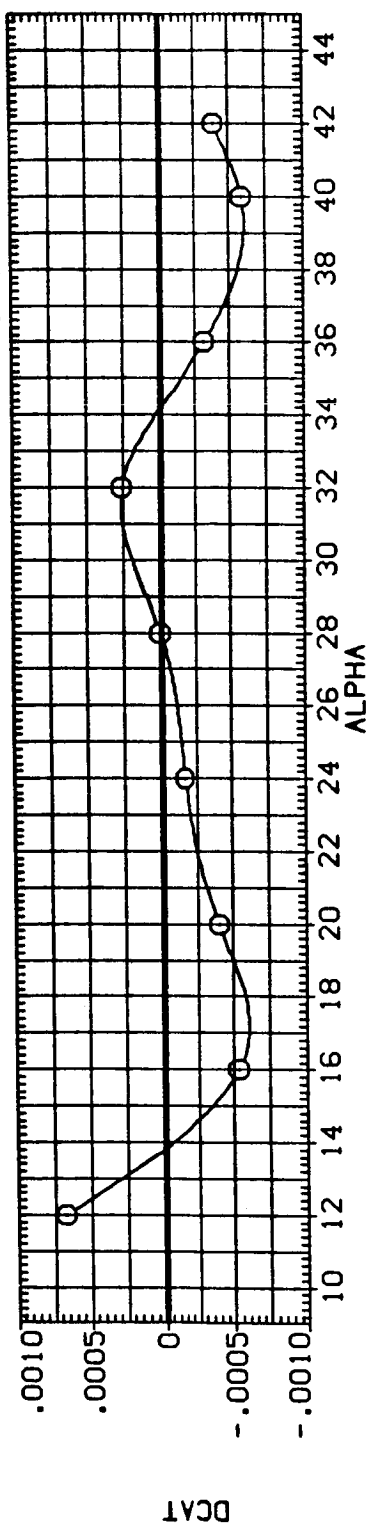


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (1EQ021)

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON	SPDRK	SREF	LREF	SQ.FT.
○	10.300	.000	.000	.000	2690.0000	474.8000	IN.
		BOFLAP	16.300	SPDRK	536.6800	1076.7000	IN.
		RUDDER	.000		YMRP	.0000	IN.
					ZMRP	375.0000	IN.
					SCALE	.0150	IN.

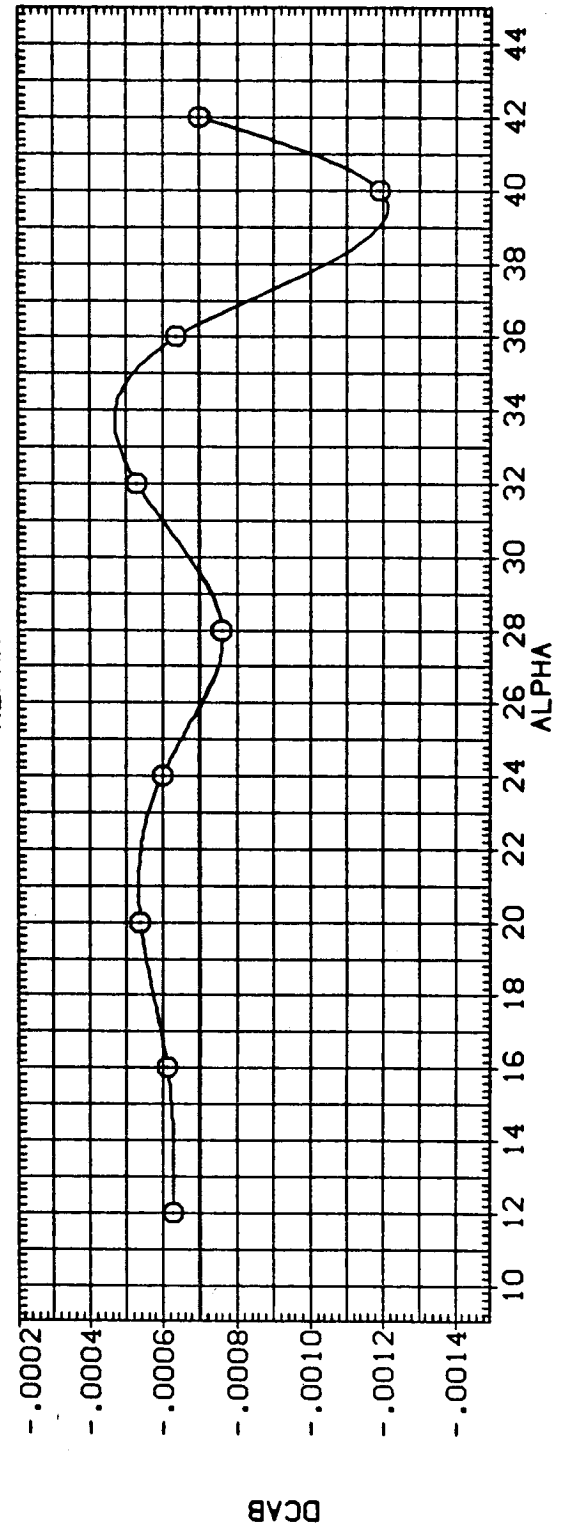
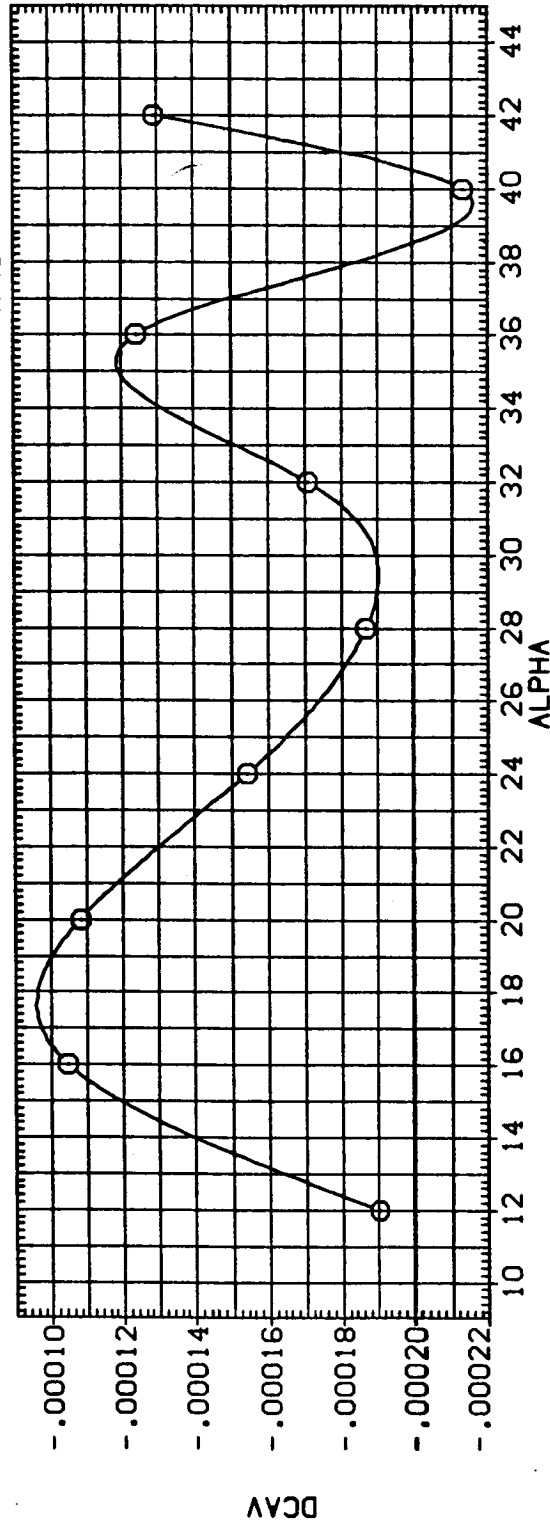


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL  
O

MACH  
10.300

BETA  
BOFLAP  
RUDDER

PARAMETRIC VALUES  
.000 ELEVON  
16.300 SPOBRK  
.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

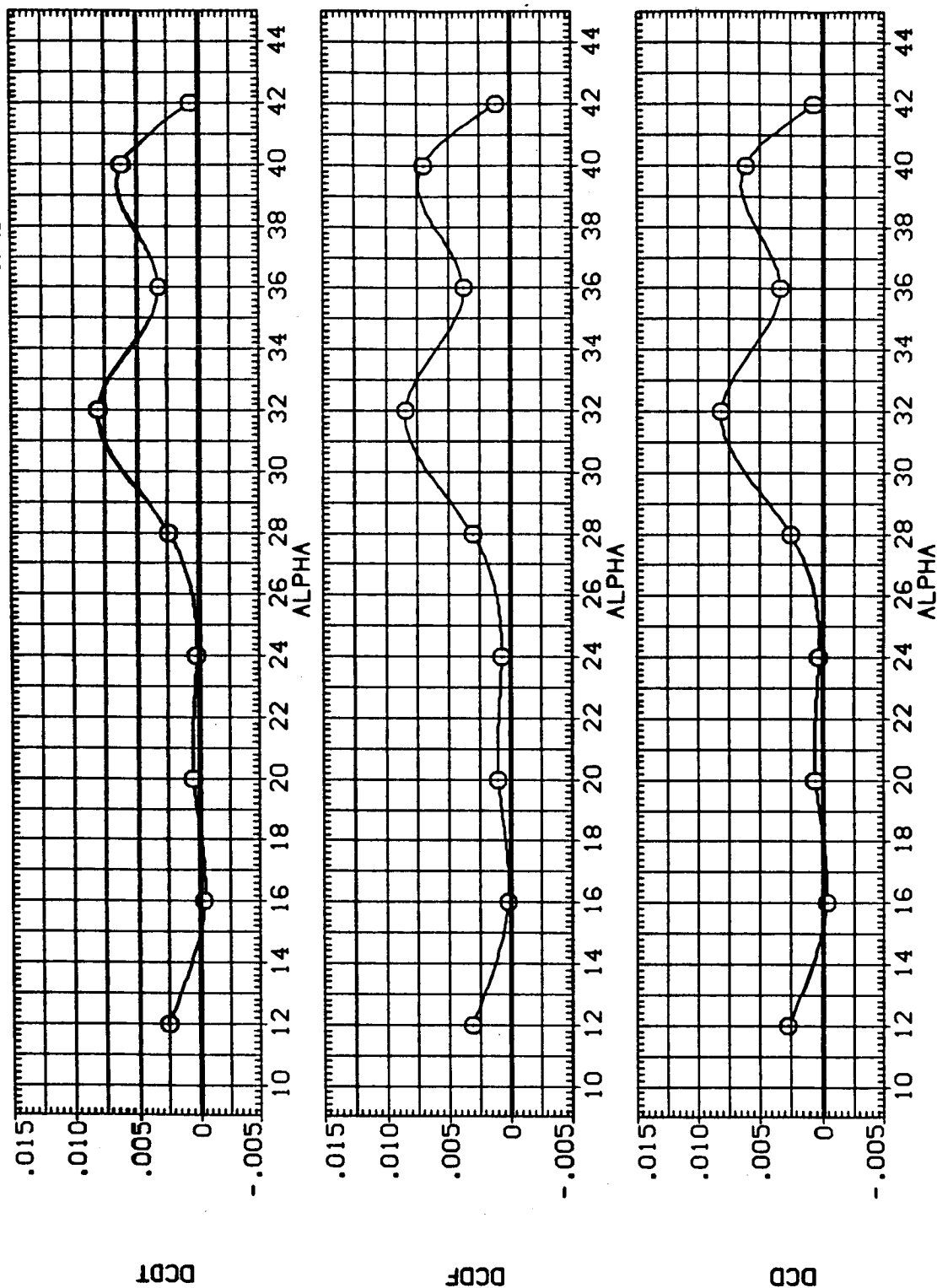


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0021)

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON	SPDRK	SREF	LRREF	SR.FT.
0	10.300	.000	.000	.000	2690.0000	474.8000	50.000
		16.300	.000	.000	936.6800	1076.7000	IN.
					YMRP	ZMRP	IN.X0
					375.0000	0.0150	IN.Y0
							IN.Z0

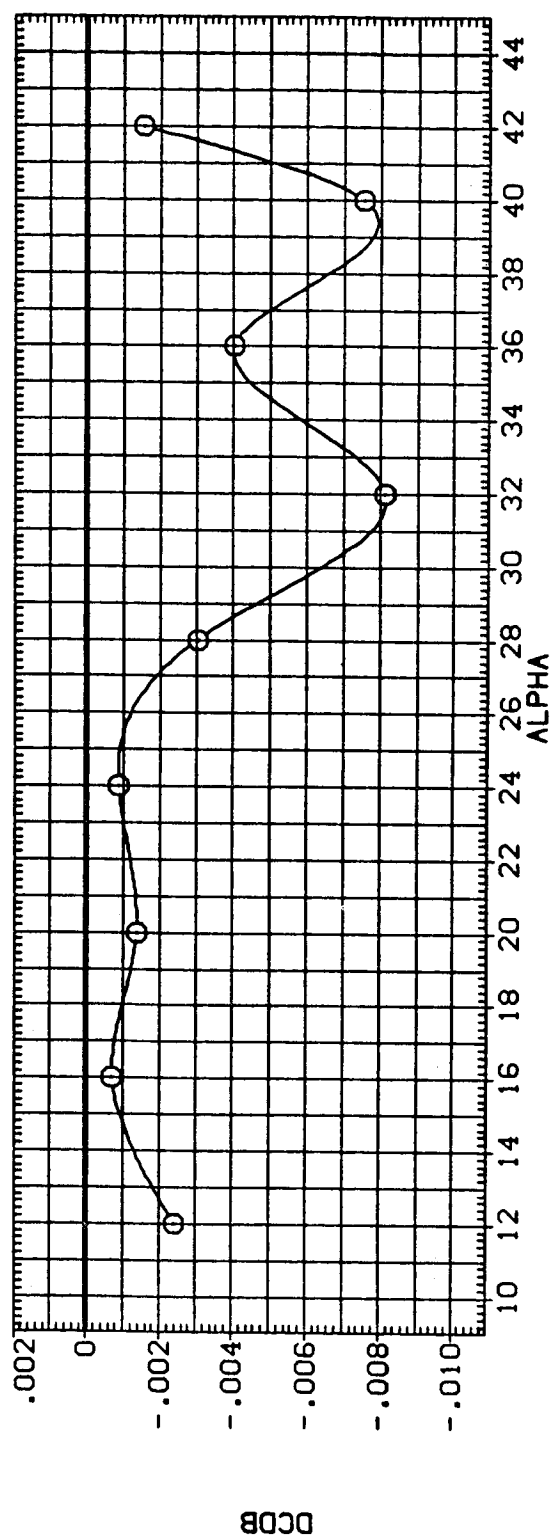
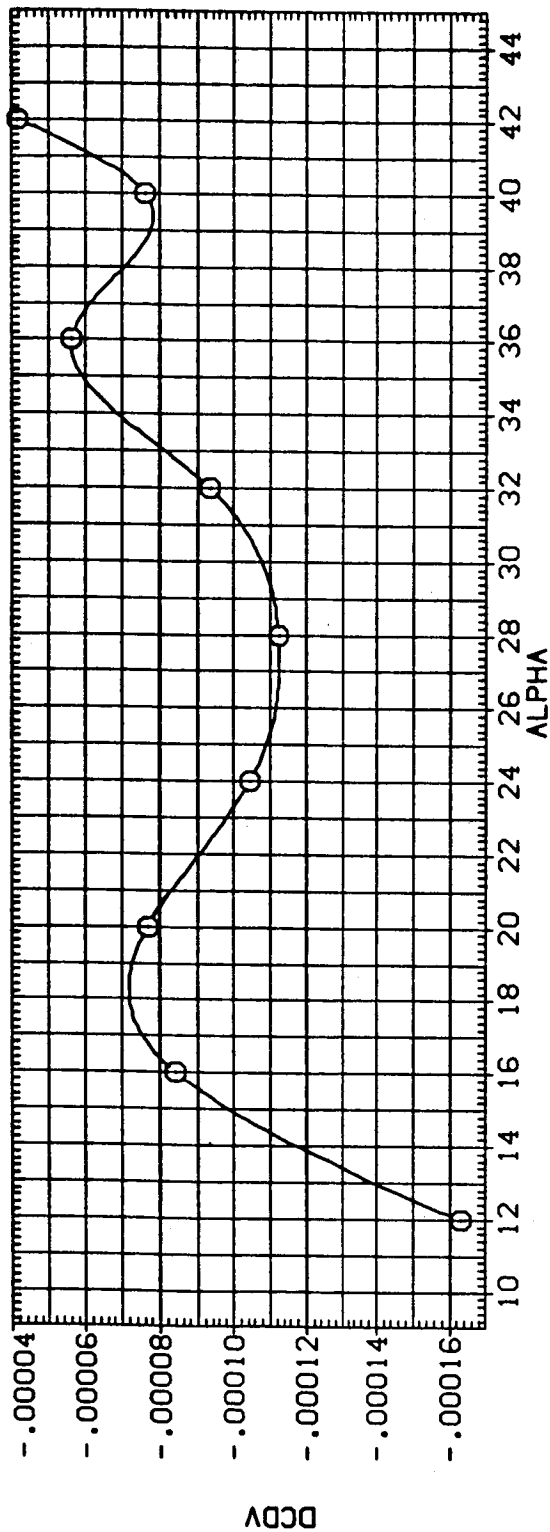


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPORBK	REFERENCE INFORMATION
(AEO005)	AVES 3.5-190 0A98 (011-M7+M14)	.000	.000	16.300	55.000	SREF 2690.0000 SQ.FT.
(AEO021)	AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XREF 1076.7000 IN.
						YREF .0000 IN.
						ZREF .0000 IN.
						SCALE .0150

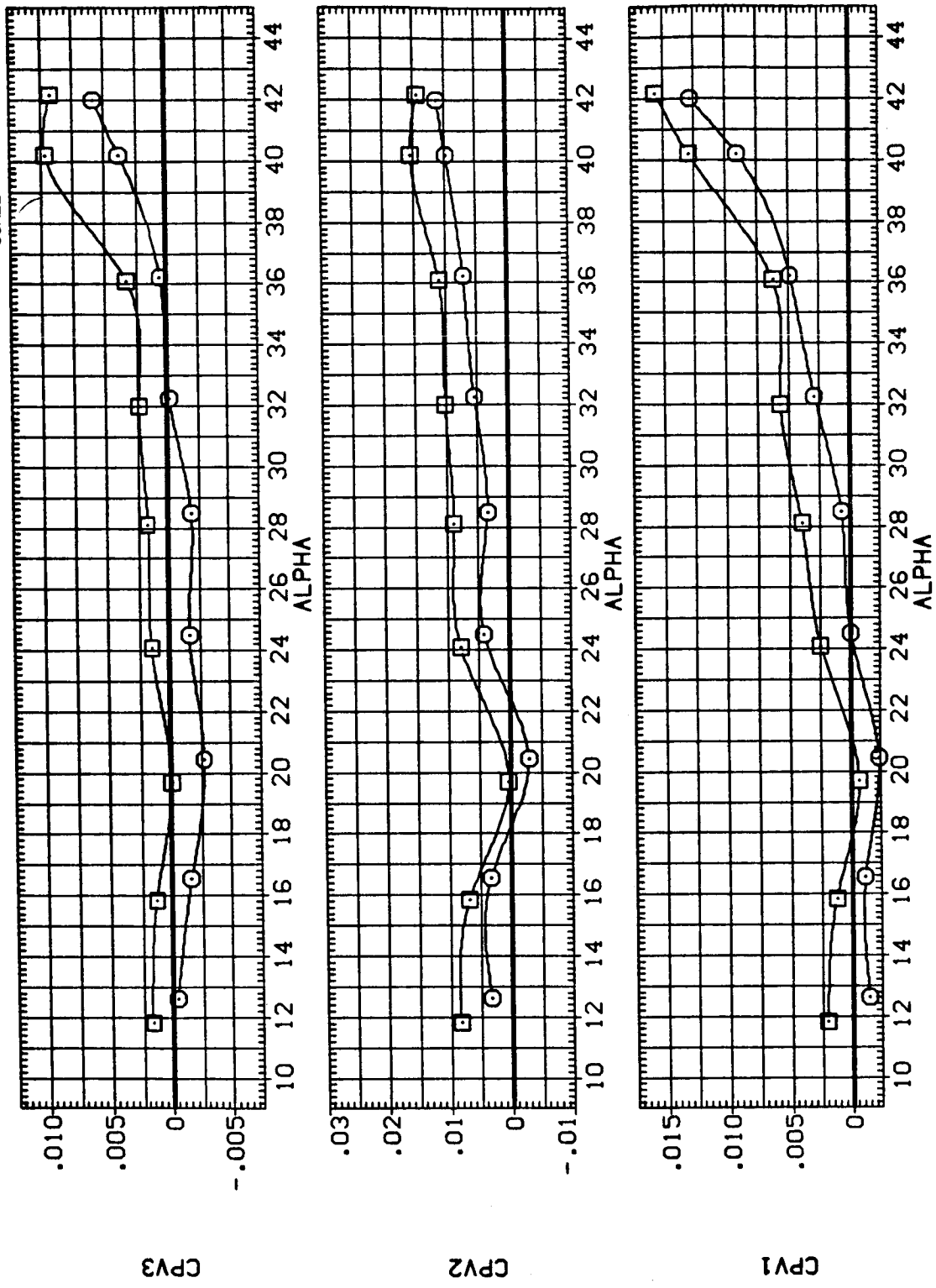


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPODBRK	REFERENCE INFORMATION
(AED005)	ANES 3.5-190 0A98 (011-K7+H14)	.000	.000	16.300	55.000	REF 2690.0000 SQ.FT.
(AED021)	ANES 3.5-190 0A98 (011-K7+H14-N24+DUM+Y STING)	.000	.000	16.300	55.000	LREF 474.8000 IN.
						BREF 936.5800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

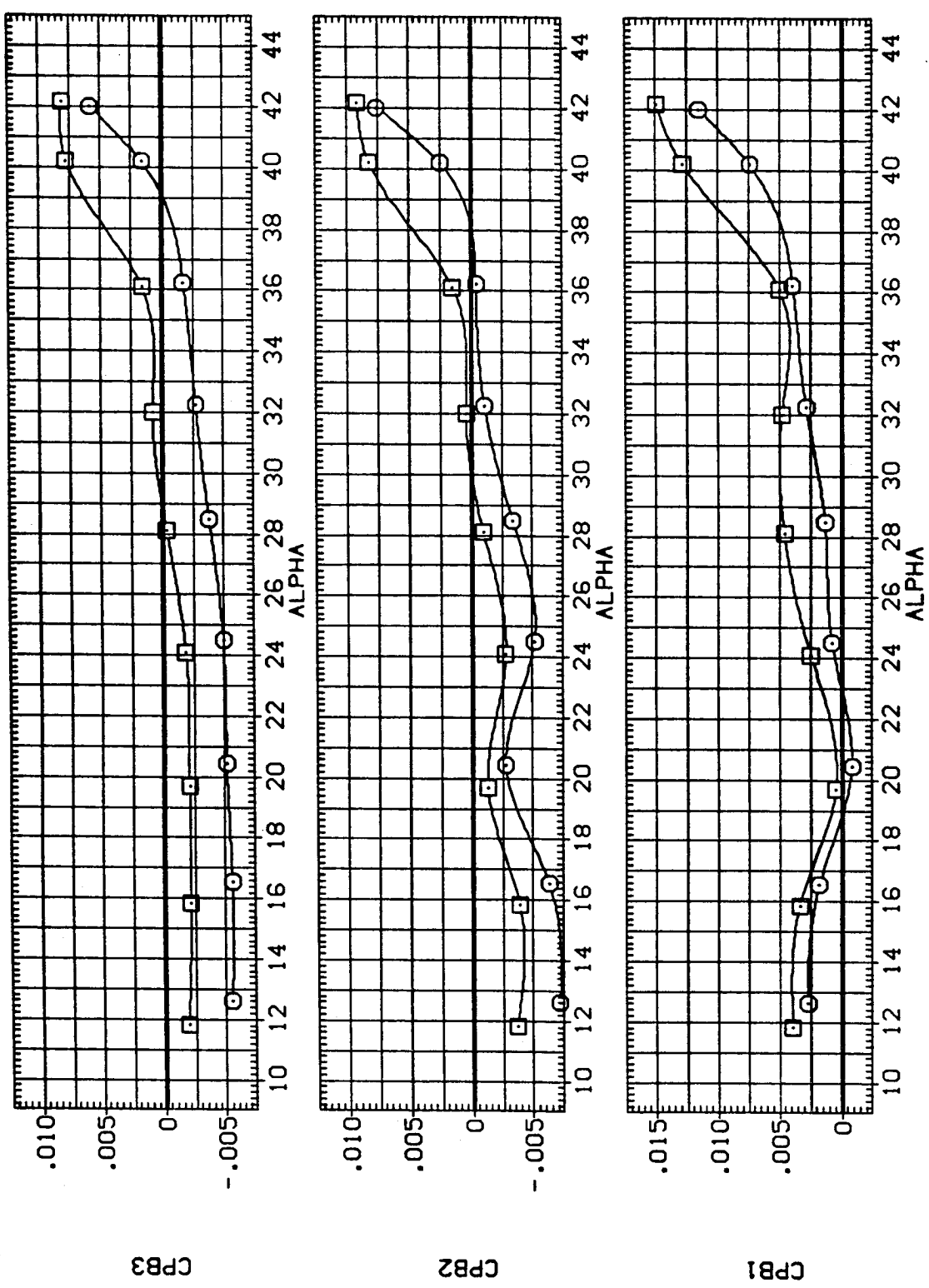


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.  
(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0006)	AVES 3.5-190 0A98 (011-M7+M14)	.000	.000	.000	55.000	SREF 2690.0000 SQ.FT.
(CE0022)	AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

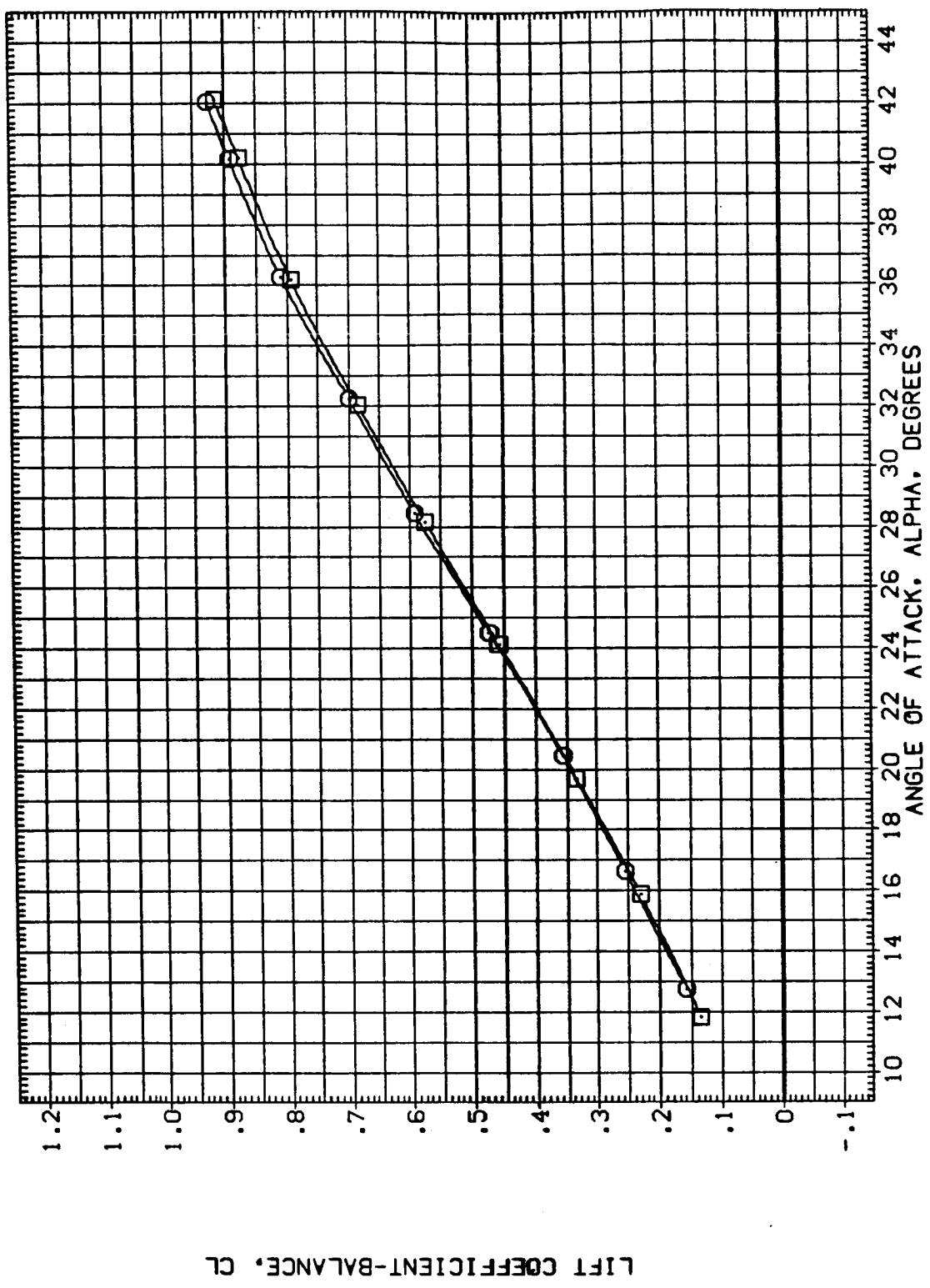


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION	
(CEQ006)	AVES 3.5-190 QAS8 (011-H7-H14)	.000	.000	.000	55.000	SREF	2690.0000 SQ.FT.
(CEQ022)	AVES 3.5-190 QAS8 (011-H7-H14-N24-DUMMY STING)	.000	.000	.000	55.000	LREF	474.8000 IN.
						BREF	936.6800 IN.
						XMRP	1076.7000 IN.X0
						YMRP	.0000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

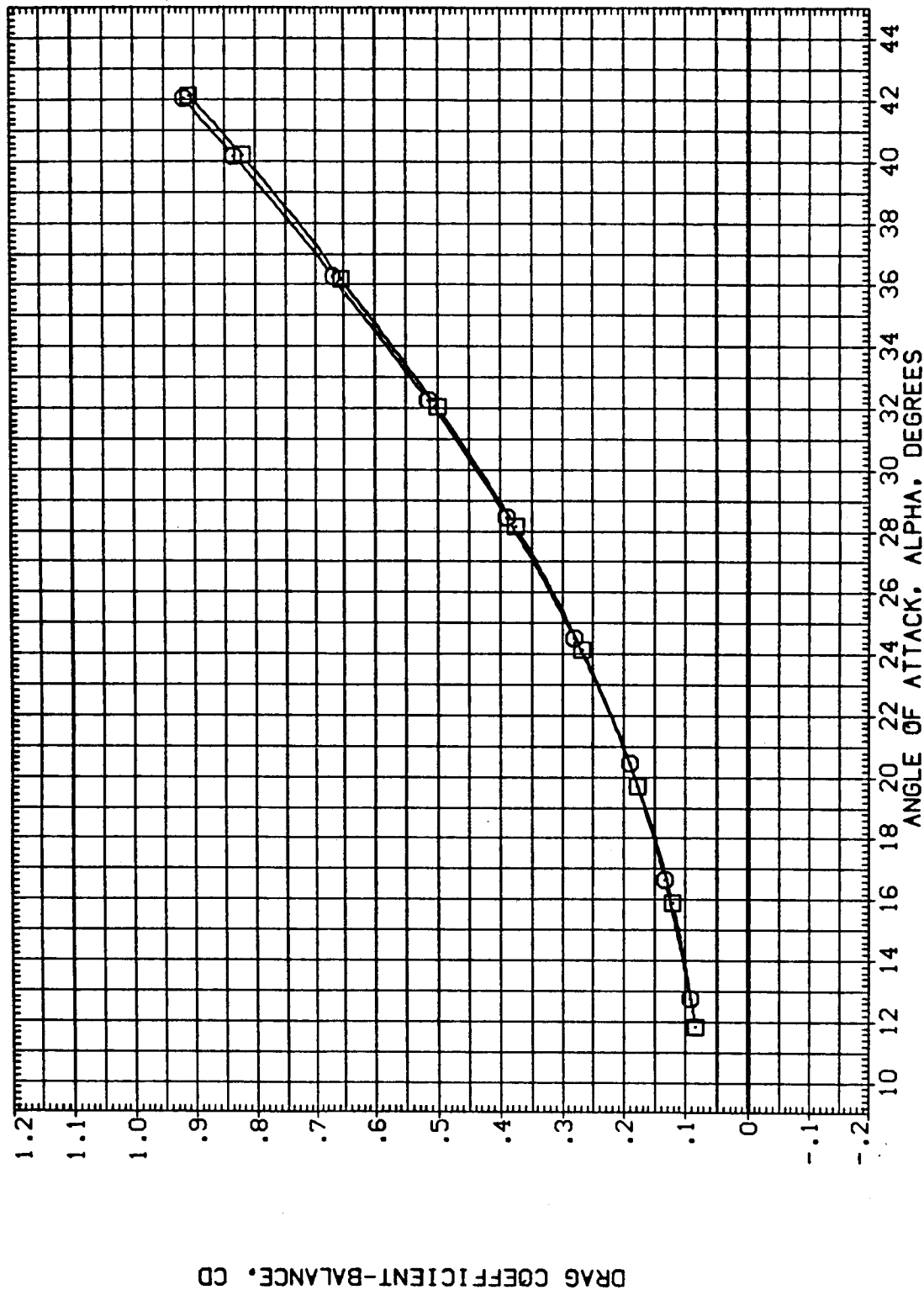


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



REFERENCE INFORMATION		50. FT
SREF	2690.0000	IN.
LREF	474.8000	IN.
BREF	936.6800	IN.
XPMP	1076.7000	IN.
YPMP	.0000	IN.
ZPMP	375.0000	IN.
SCALE	.0150	IN.

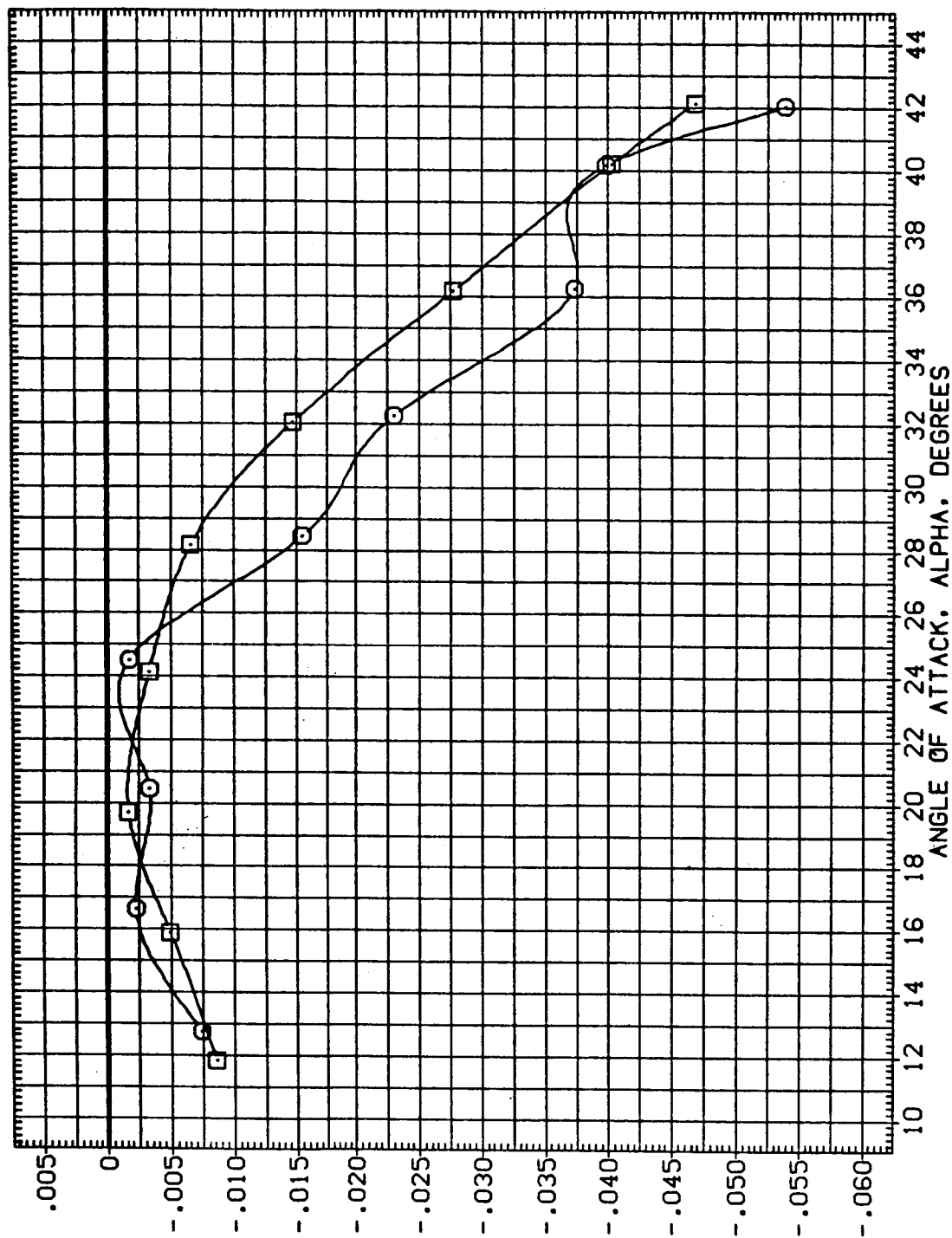


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

**CALMACH = 10.27**

DATA SET SYMBOL (CE0006)  
 (CE0022)

CONFIGURATION DESCRIPTION  
 AMES 3.5-190 0A98 (011-117+114)  
 AMES 3.5-190 0A98 (011-117+114-124+125+126)

BETA .000  
 ELEVON .000  
 BOFLAP .000

SPDRK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMAFT

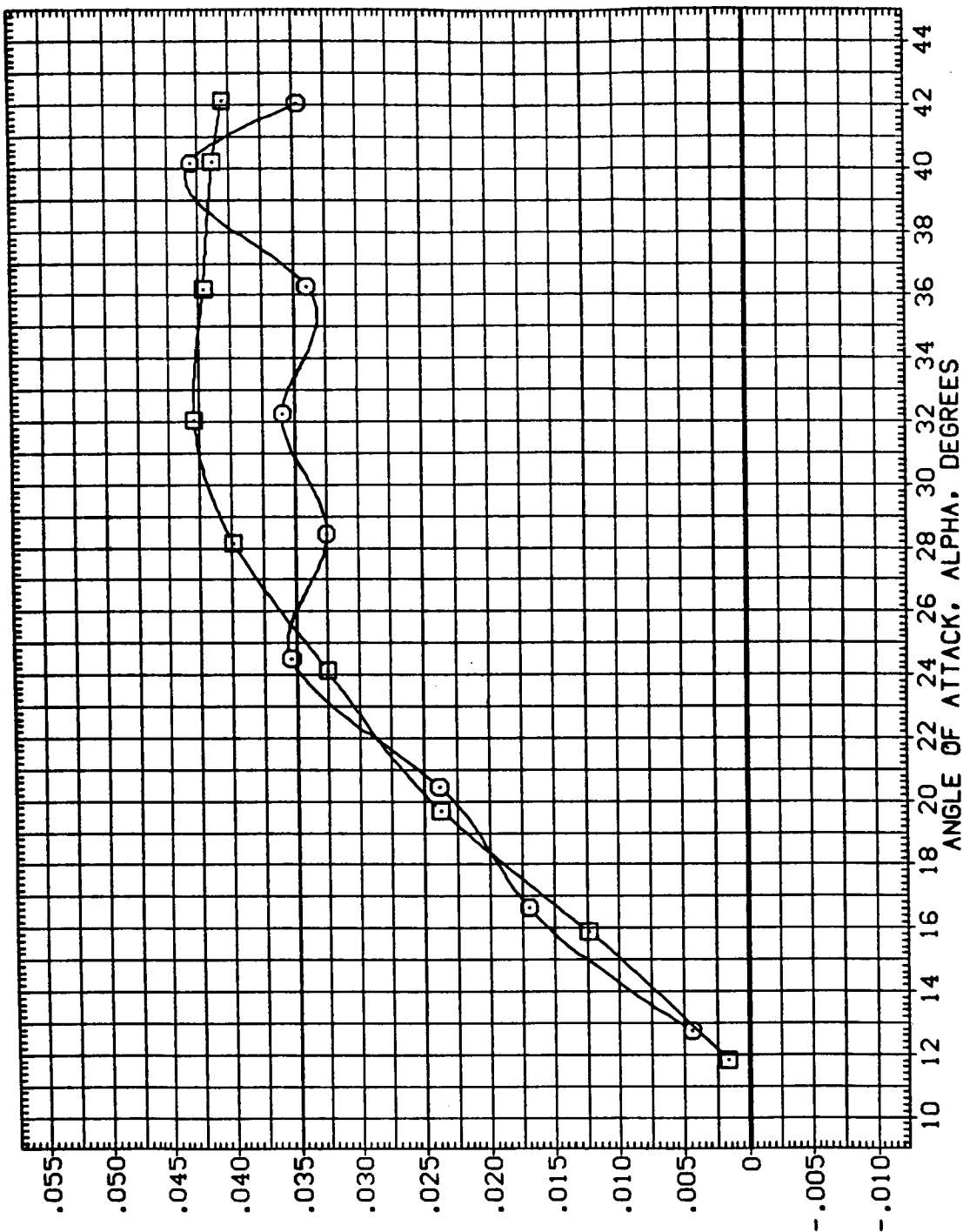


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0006)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	.000	55.000	SREF 2690.0000 SQ.FT.
(CE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

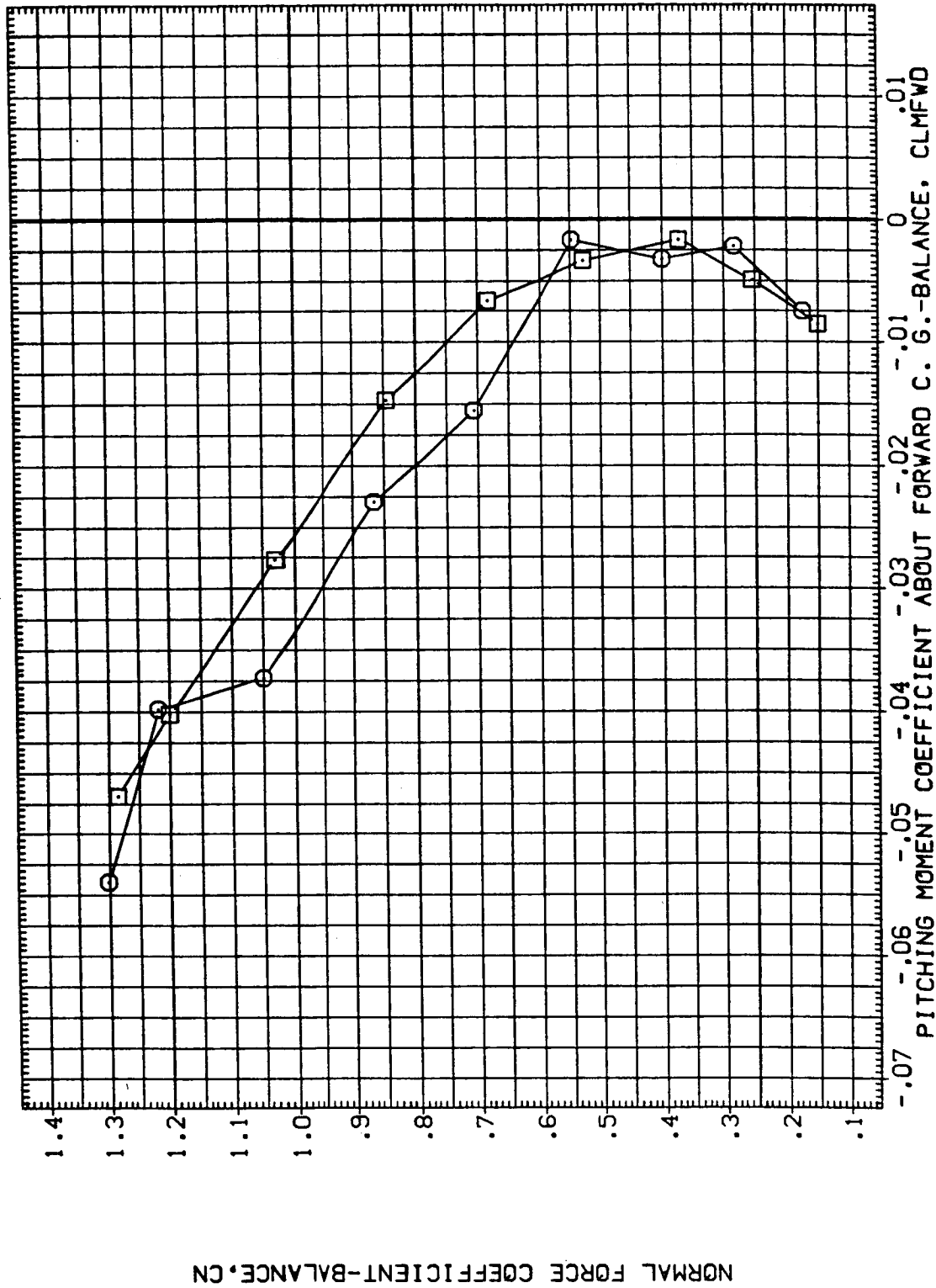


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0006)	AVES 3.5-190 0A98 (011-M7-M14)	.000	.000	.000	55.000	SREF 2690.0000 SQ.FT.
(CE0022)	AVES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XPRP 1076.7000 IN.X0
						YPRP .0000 IN.Y0
						ZPRP .0000 IN.Z0
						SCALE .0150

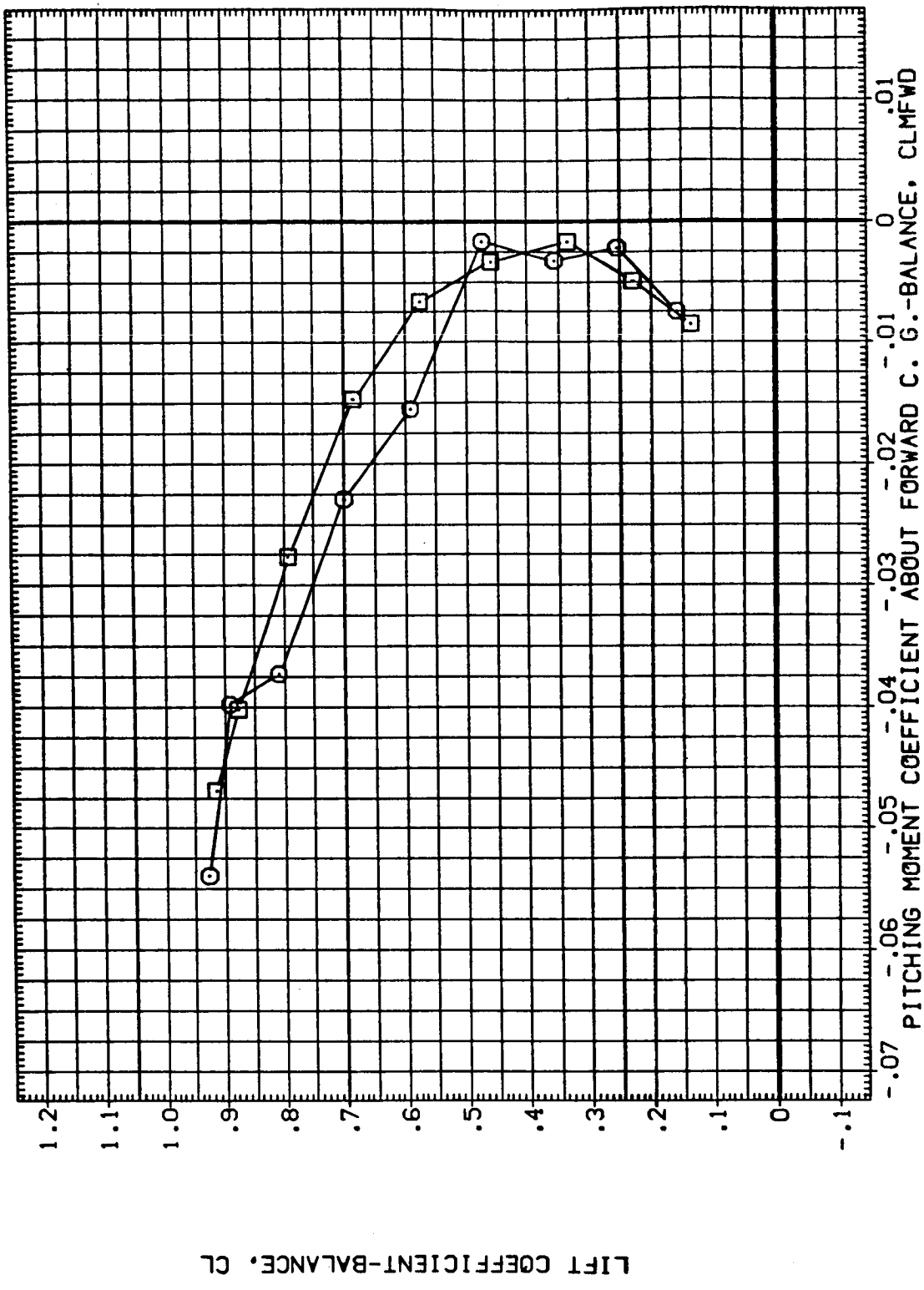


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CE0006)	AVES 3.5-190 0A98 (011-M7+H14)	.000	.000	.000	55.000	SREF 2690.0000 50.FT.
(CE0022)	AVES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

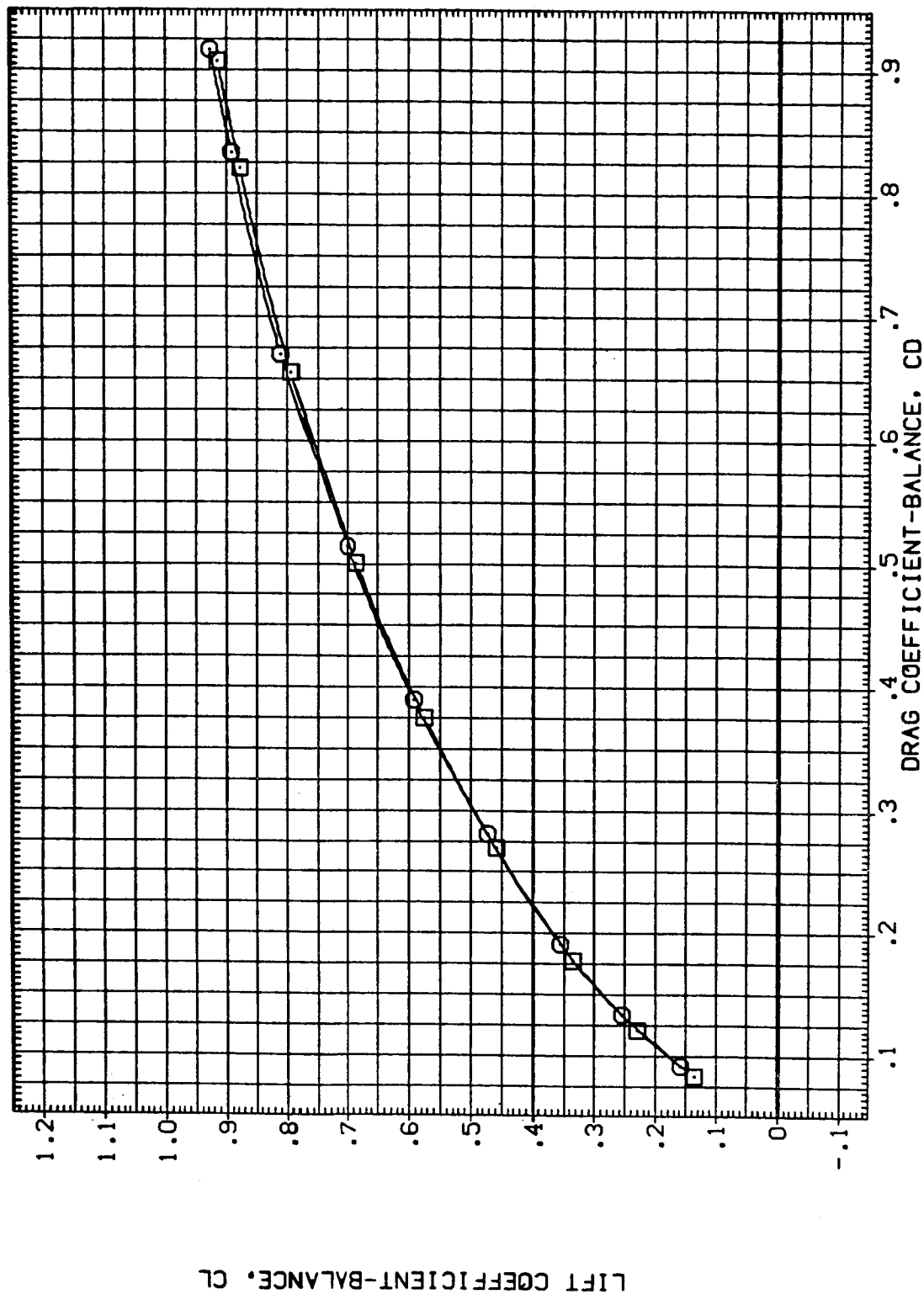


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EEQ006)	AVES 3.5-190 0A98 (011-H7-H14)	.000	.000	.000	55.000	SREF 2690.0000 SQ.FT.
(EEQ022)	AVES 3.5-190 0A98 (011-H7-H14-N24-DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6000 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

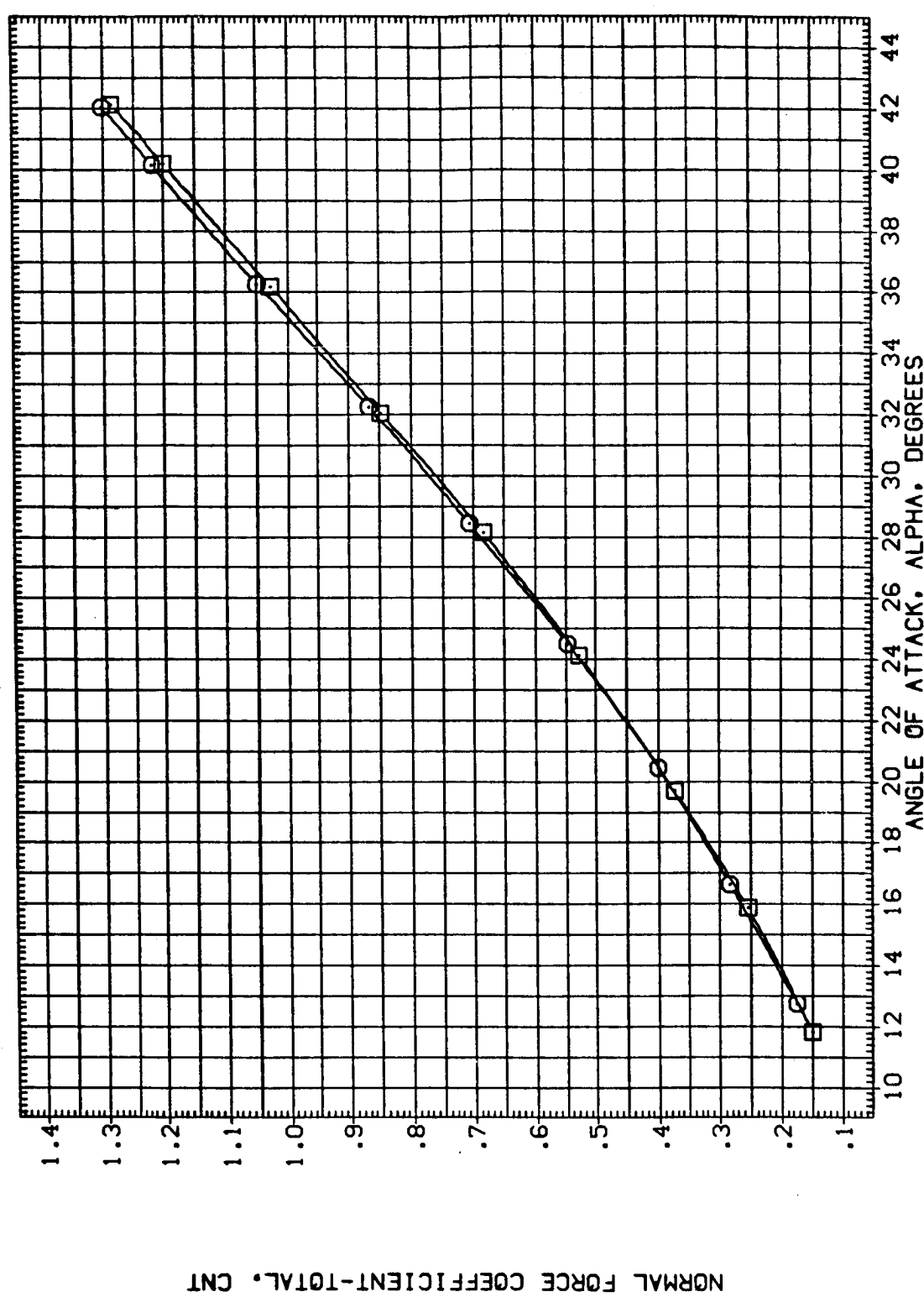


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0006)	APES 3.5-190 0A98 (011-H7+H14)	.000	.000	.000	SS.000	SREF 2690.0000 SQ.FT.
(EE0022)	APES 3.5-190 0A98 (011-H7+H14-N24+DUMMY STING)	.000	.000	.000	SS.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

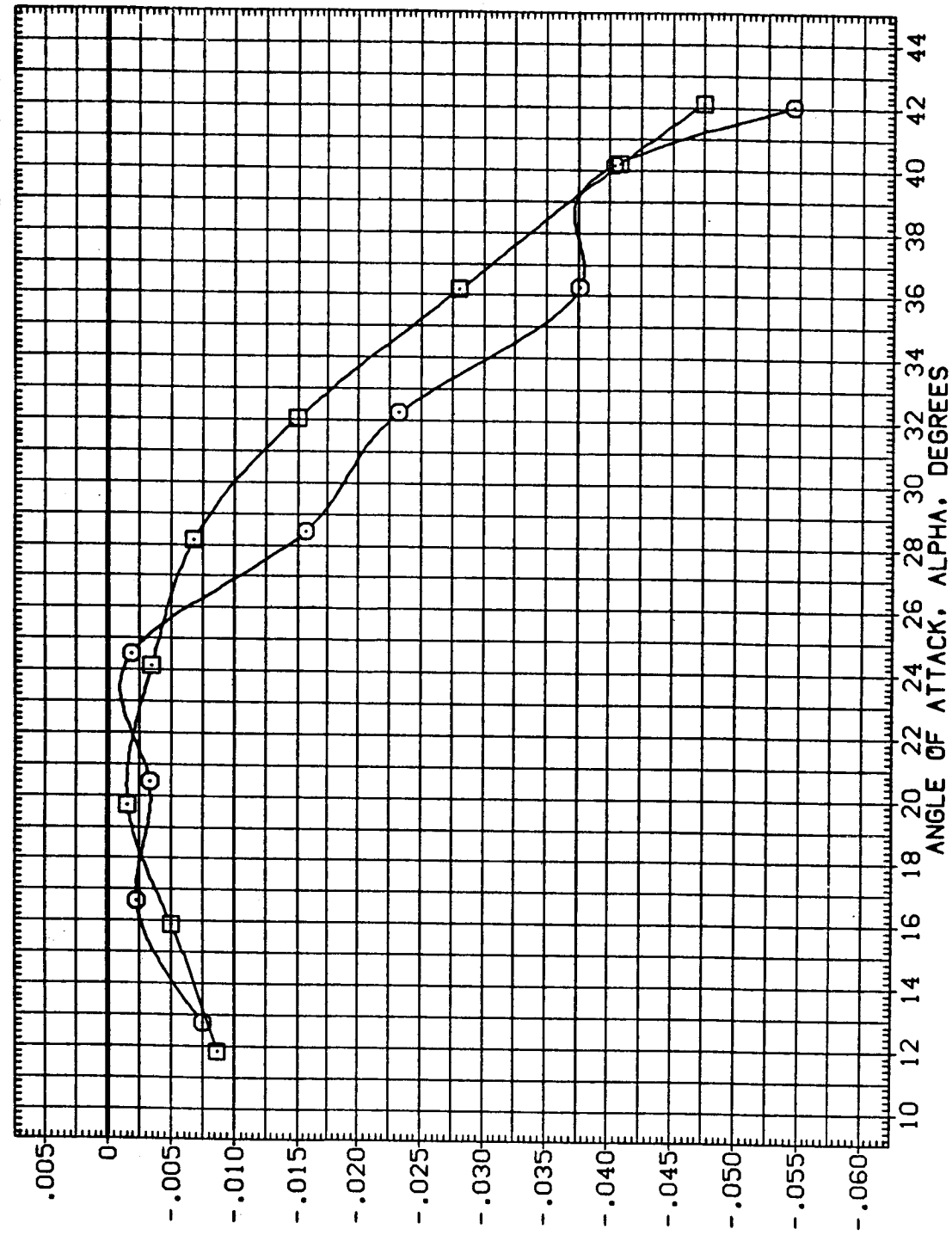


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0006)  
 (EE0022)

CONFIGURATION DESCRIPTION  
 AVES 3.5-190 0A98 (011-47-M14)  
 AVES 3.5-190 0A98 (011-47-M14-124-DUMMY STING)

BETA .000  
 ELEVON .000  
 BOFLAP .000  
 SPOBRK .000  
 SPDRK .000  
 SPDRK .000

REFERENCE INFORMATION  
 SREF 2690.0000 50.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-TOTAL, CMTAFT

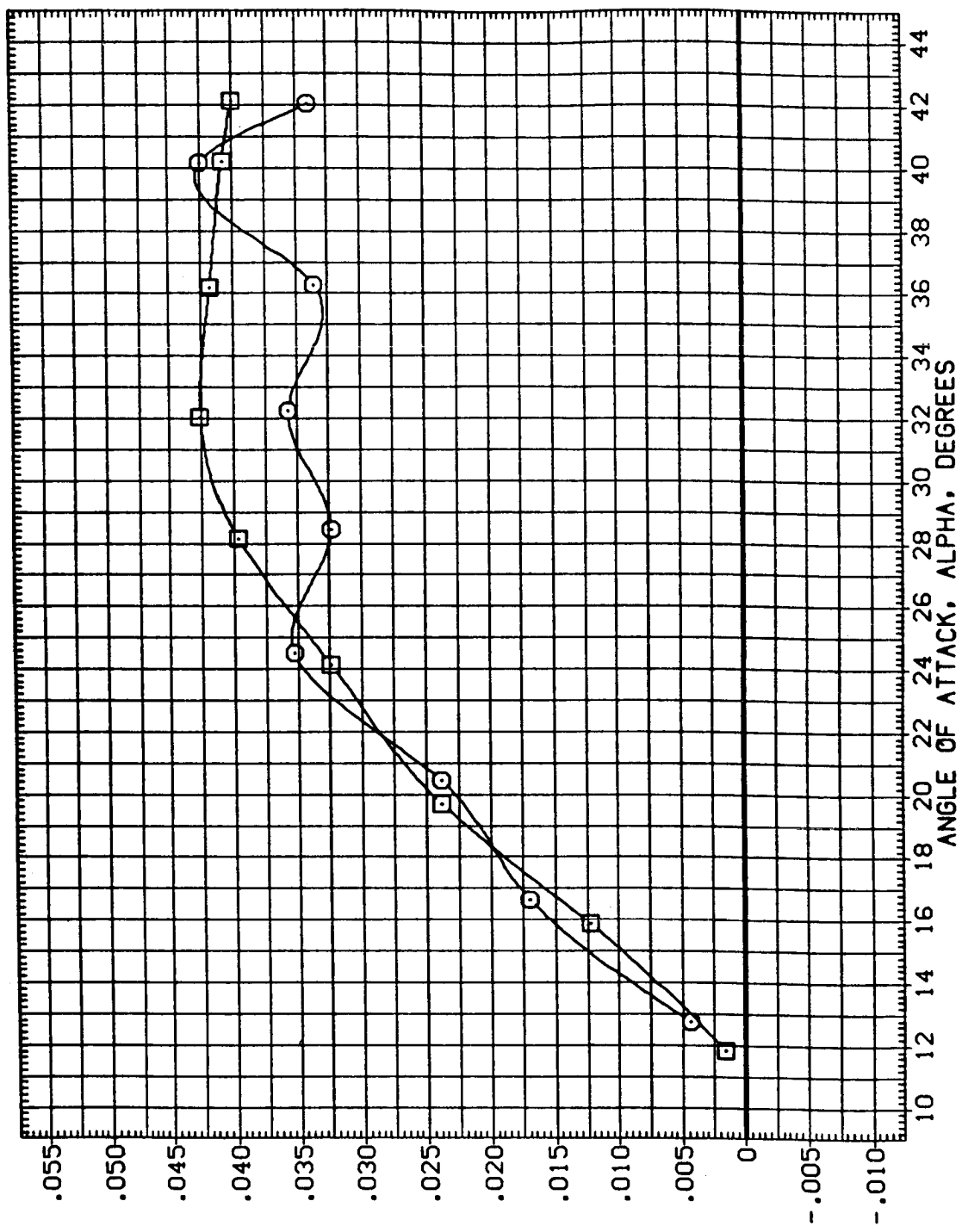


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0006)	AMES 3.5-190 0A98 (011-H7+H14)	.000	.000	.000	55.000	SREF 2690.0000 SQ.FT.
(EE0022)	AMES 3.5-190 0A98 (011-H7+H14+N24+DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

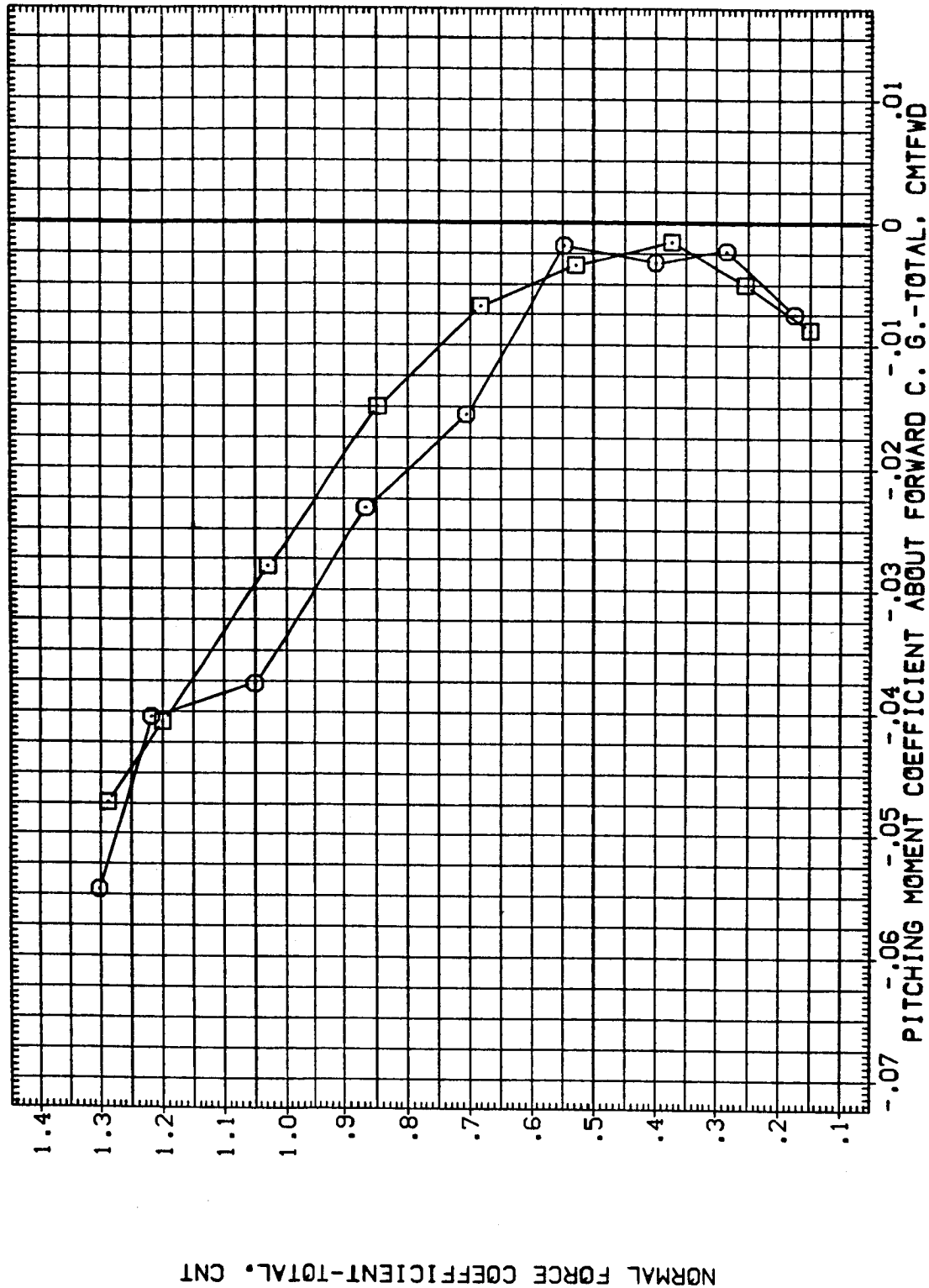


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (E0006) (E0022)

CONFIGURATION DESCRIPTION  
 ARES 3.5-190 OA98 (011-47+114)  
 ARES 3.5-190 OA98 (011-47+114-N24+DUMMY STING)

BETA .000 .000

ELEVON .000 .000

BOFLAP .000 .000

SPODBK 55.000 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

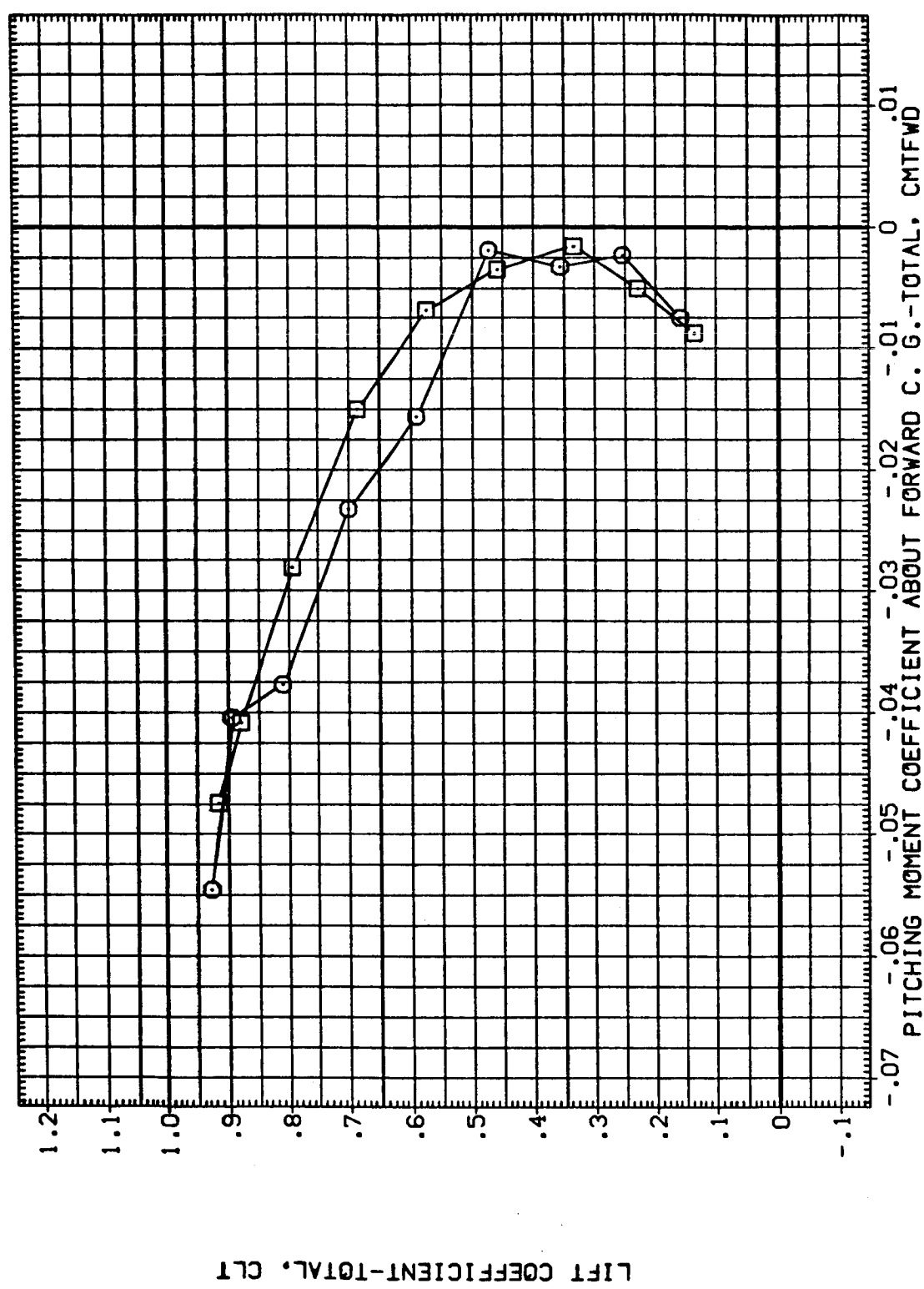


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(EE0006)	AMES 3.5-190 0/98 (011-M7+M14)	.000	.000	.000	55.000	SREF 2690.0000 50.FT.
(EE0022)	AMES 3.5-190 0/98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 536.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

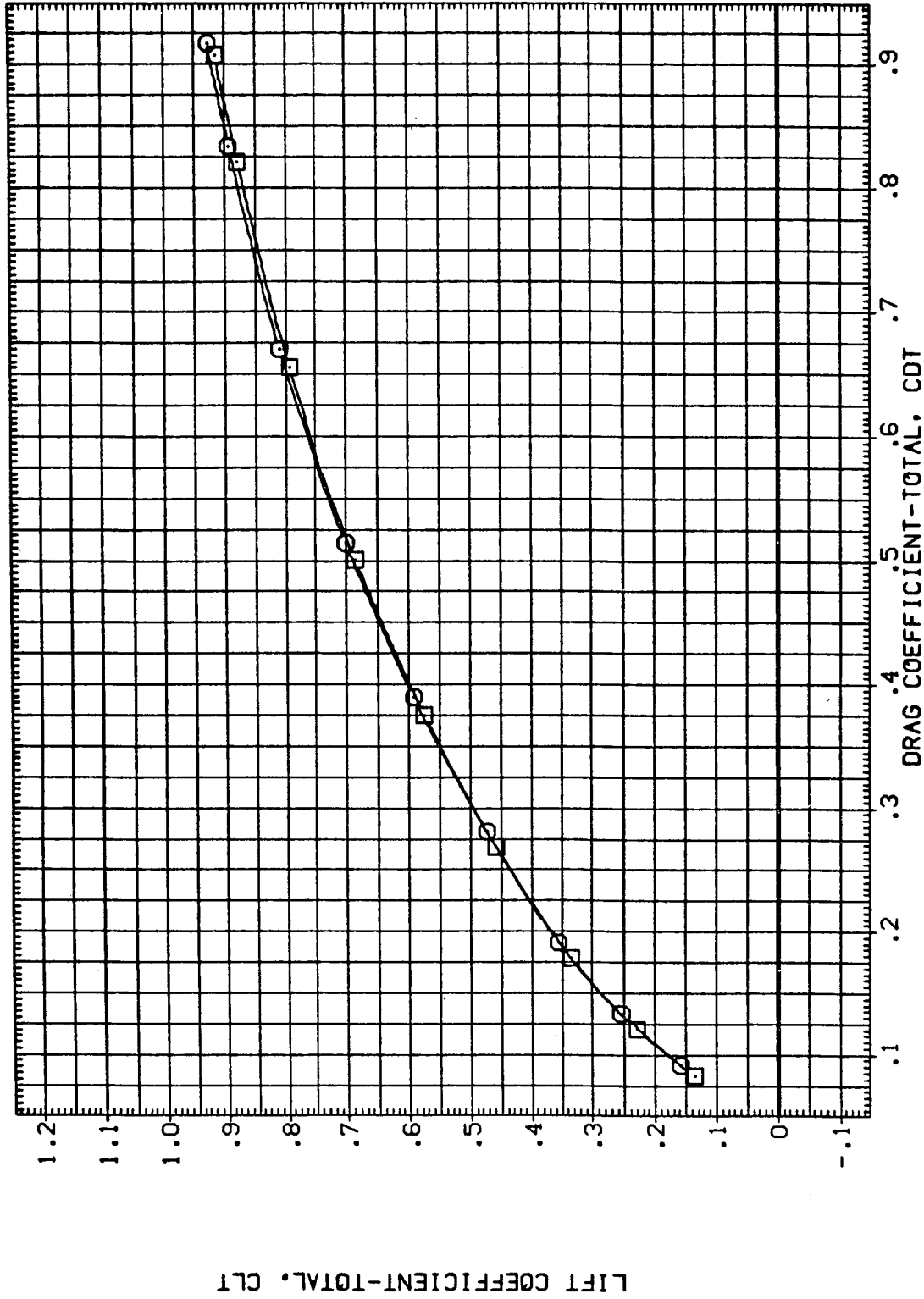


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0006) (EE0022) B  
 CONFIGURATION DESCRIPTION  
 ARES 3.5-190 0A98 (011-M7-M14)  
 ARES 3.5-190 0A98 (011-M7-M14-N24+JUNNY STING)

BETA .000  
 ELEVON .000  
 BOFLAP .000  
 SPOBRK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

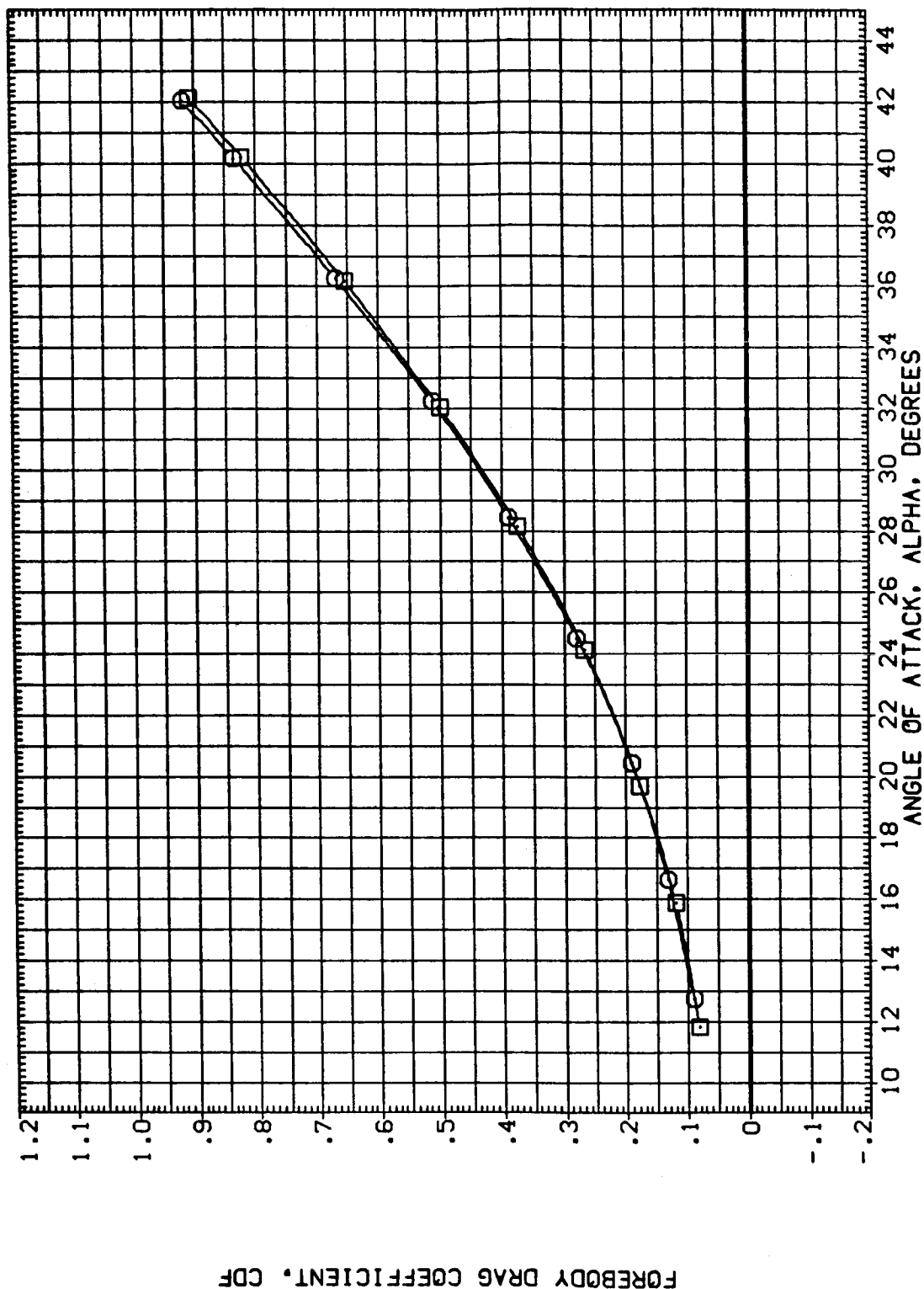


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0006)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	.000	55.000	SREF 2690.0000 50.FT.
(EE0022)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XPRP 1076.7000 IN.X0
						YPRP .0000 IN.Y0
						ZPRP .0000 IN.Z0
						SCALE .0150

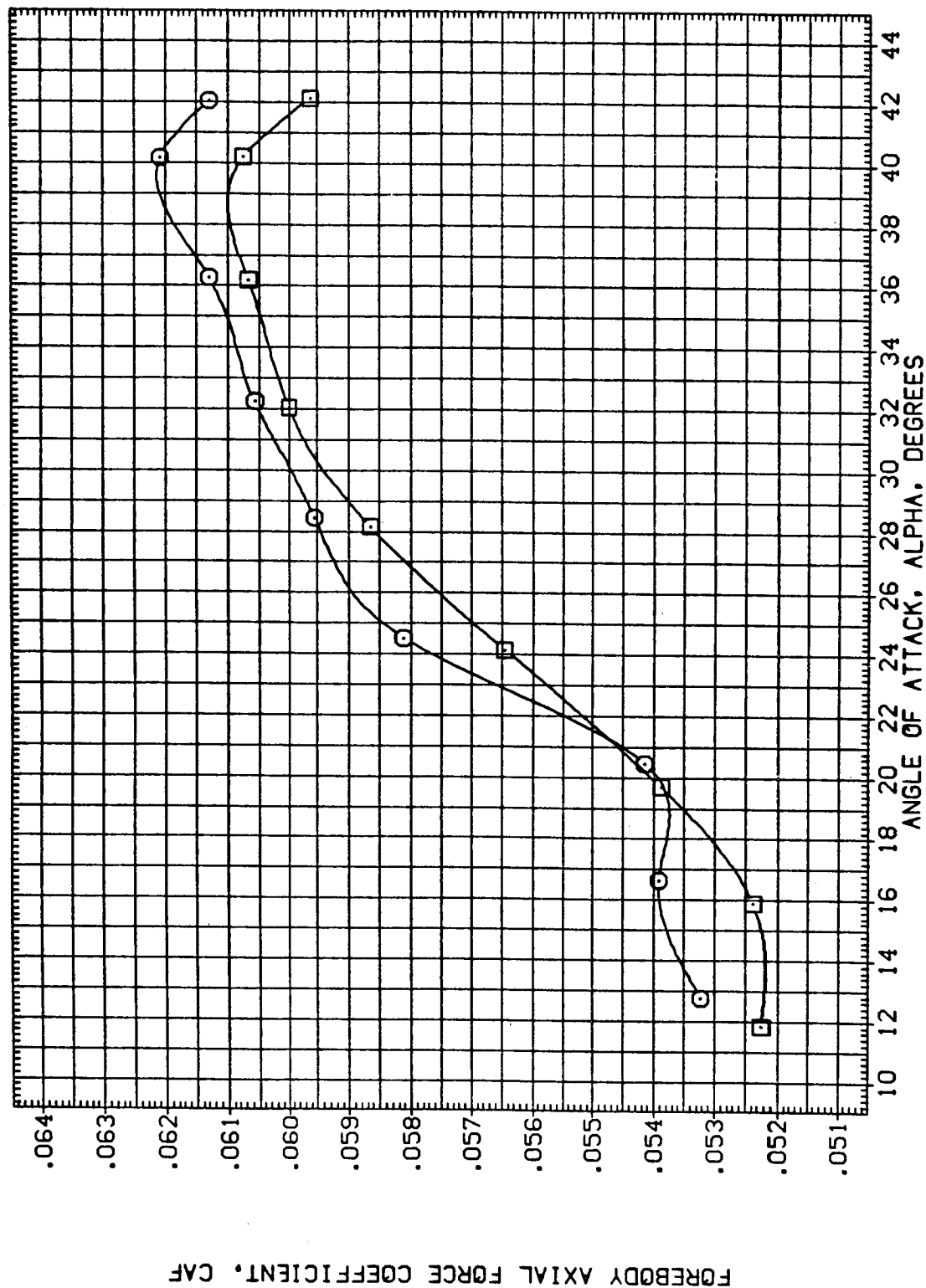


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BEG006)	AMES 3.5-190 OA98 (011-H7+H14)	.000	.000	.000	55.000	SREF 2690.0000 SQ.FT.
(BEG022)	AMES 3.5-190 OA98 (011-H7+H14-N24+JUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

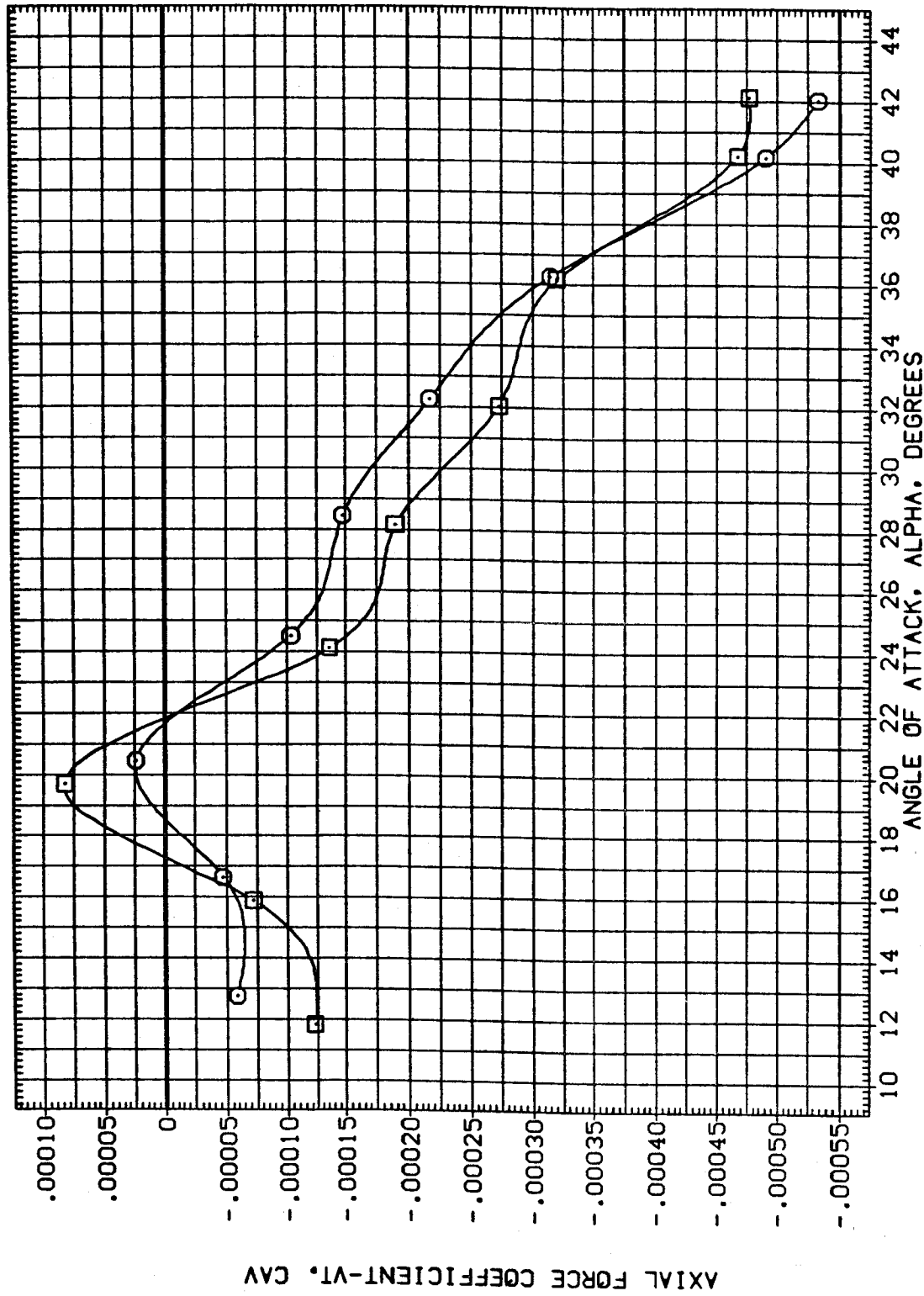


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0006)	AMES 3.5-150 0A98 (011-47+114)	.000	.000	.000	55.000	SREF 2690.0000 SQ.FT.
(BE0022)	AMES 3.5-150 0A98 (011-47+114-424+044+114)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XREF 1076.7000 IN.
						YREF .0000 IN.
						ZREF 375.0000 IN.
						SCALE .0150

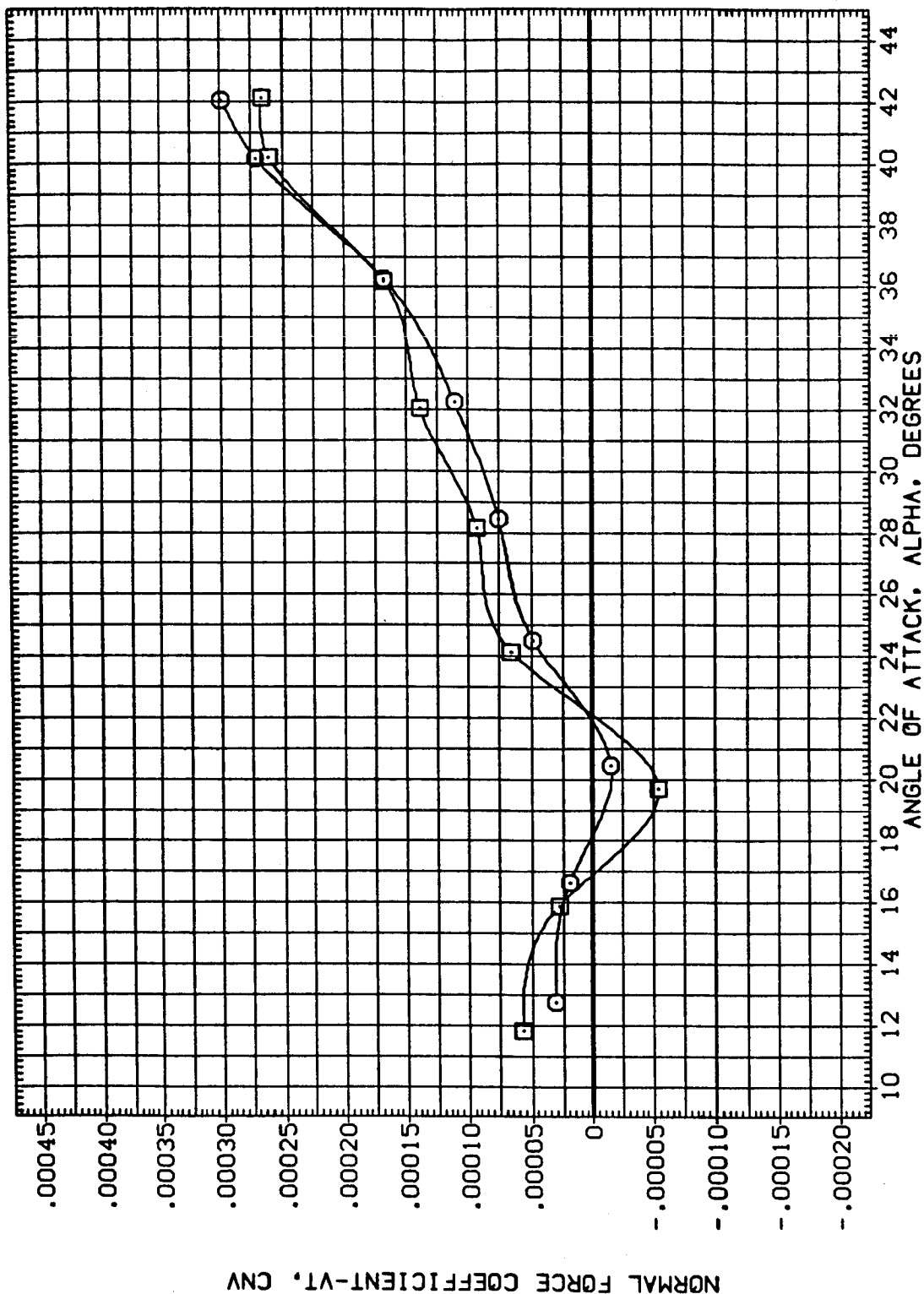


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(BE0006)	AVES 3.5-190 0A98 (011-H7-H14)	.000	.000	.000	55.000	SREF 2690.0000 SO.FT.
(BE0022)	AVES 3.5-190 0A98 (011-H7-H14-N24-DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X8
						YMRP .0000 IN.Y8
						ZMRP 375.0000 IN.Z8
						SCALE .0150

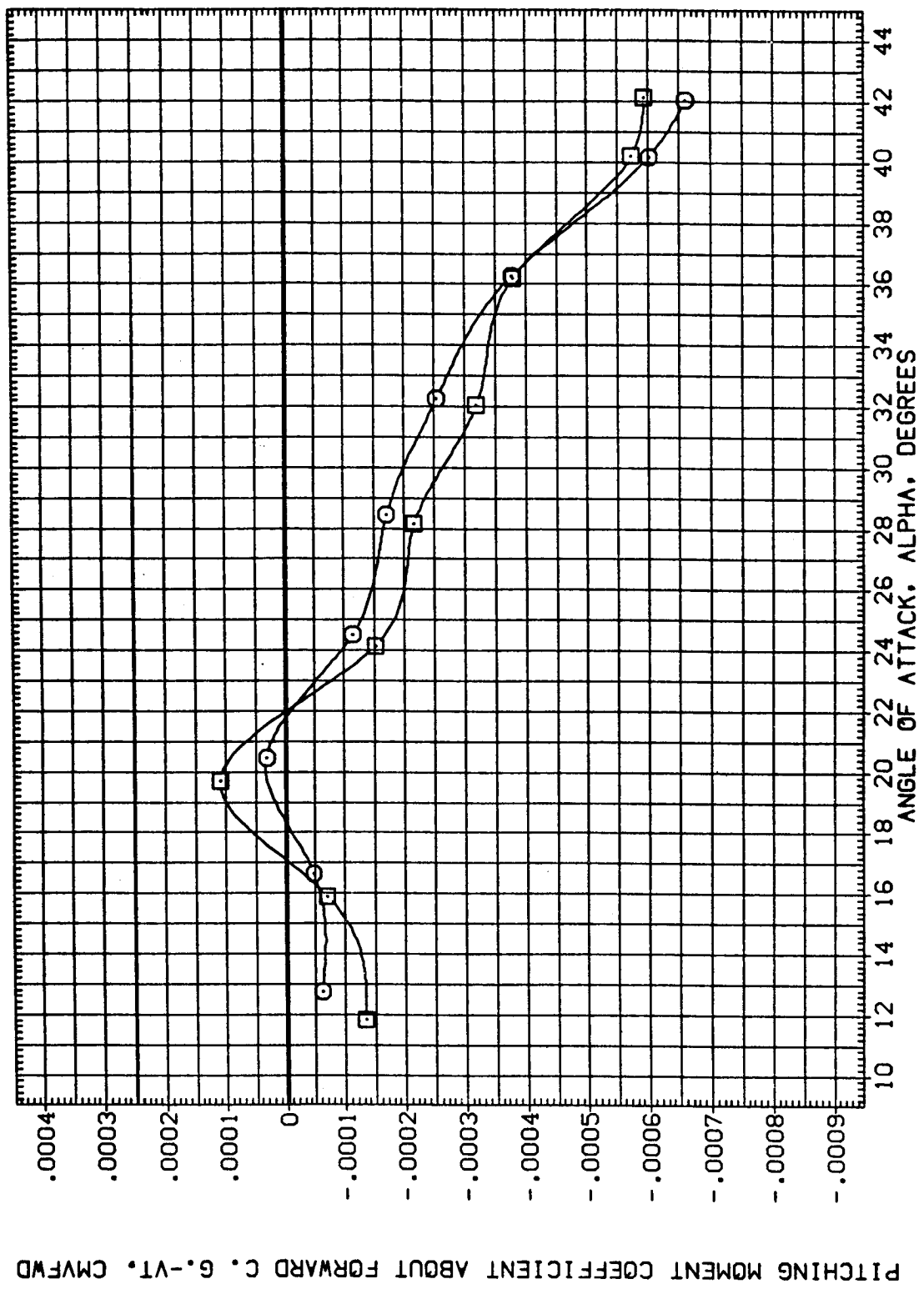



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (BE0006) (BE0022)  CONFIGURATION DESCRIPTION AMES 3.5-190 OA98 (011-H7+H14) AMES 3.5-190 OA98 (011-H7+H14-N24+DUMMY STING) REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP 375.0000 IN. ZMRP 0.0150 SCALE

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

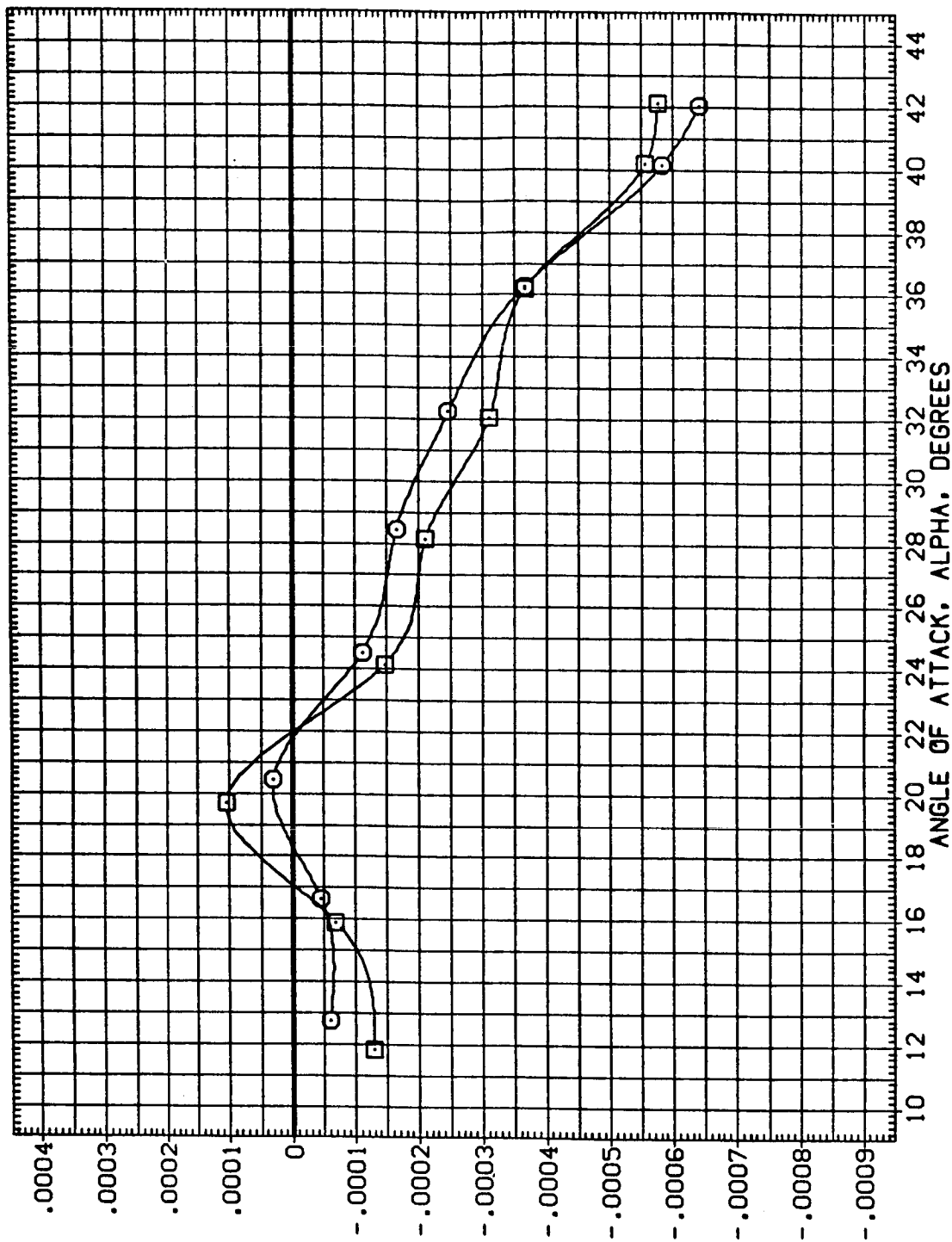


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(MACH = 10.27

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0022)

PARAMETRIC VALUES				REFERENCE INFORMATION			
SYMBOL	MACH	BETA	ELEVON	SREF	2690.0000	50.FT.	
0	10.300	80FLAP	.000	LREF	474.8000	IN.	
		RUDDER	.000	BREF	936.6800	IN.	
			.000	XMRP	1076.7000	IN.X0	
				YMRP	.0000	IN.Y0	
				ZMRP	375.0000	IN.Z0	
				SCALE	.0150		

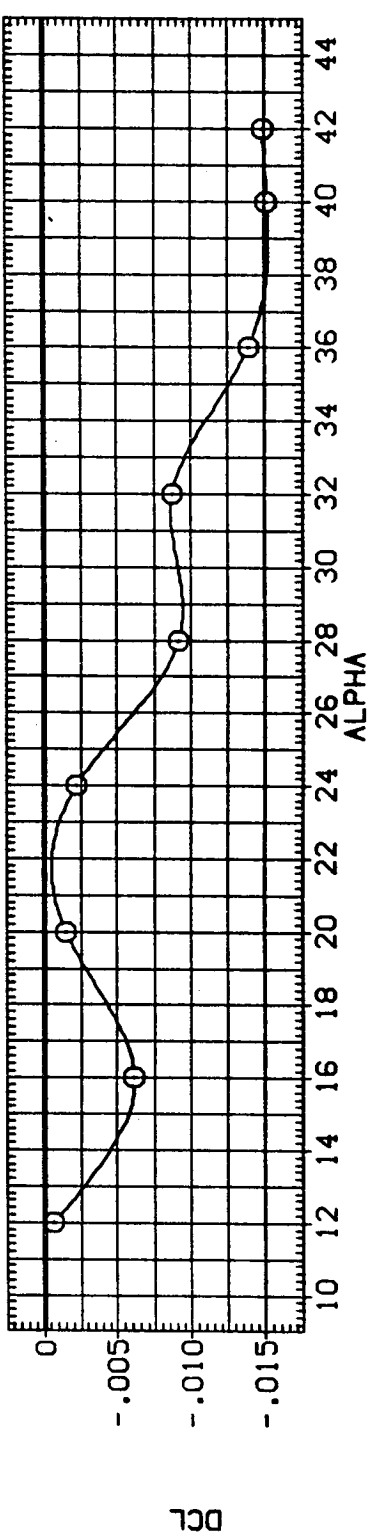
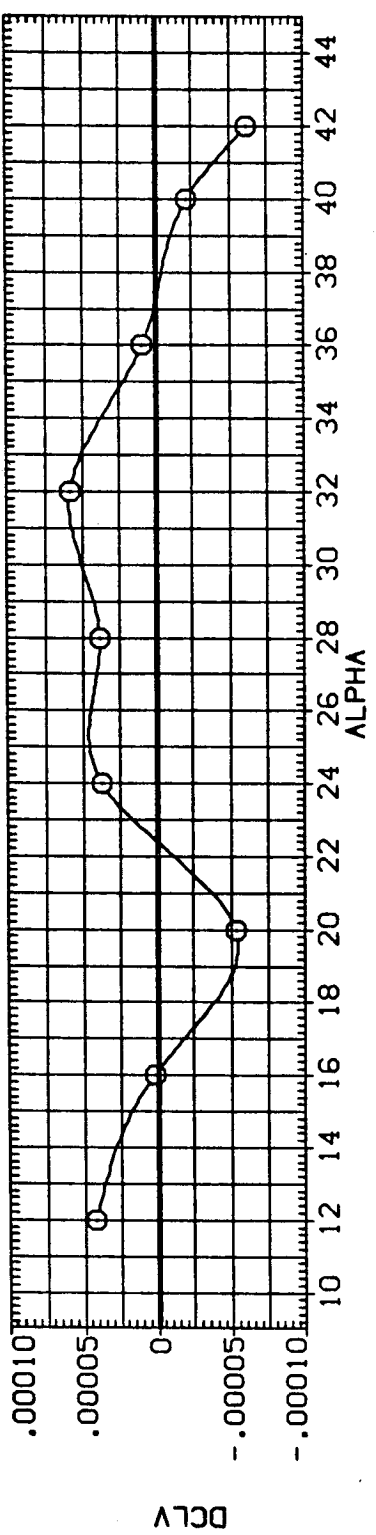
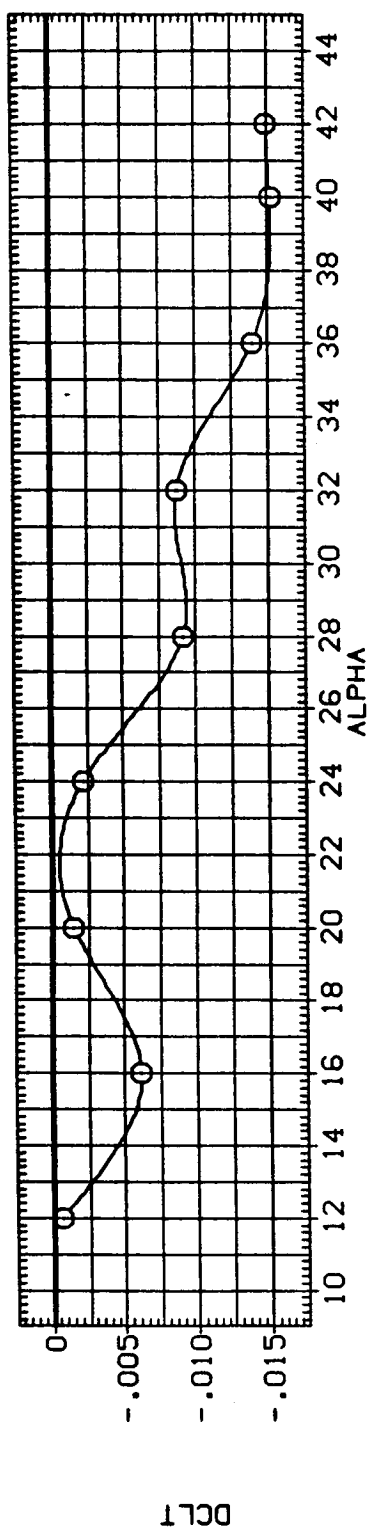


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZEQ022)

SYMBOL MACH  
 O 10.300

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XARP 1076.7000 IN.X0  
 YARP .0000 IN.Y0  
 ZARP 375.0000 IN.Z0  
 SCALE .0150

PARAMETRIC VALUES  
 BETA .000 ELEVON .000  
 BOFLAP .000 SPOBRK 55.000  
 RUDDER .000

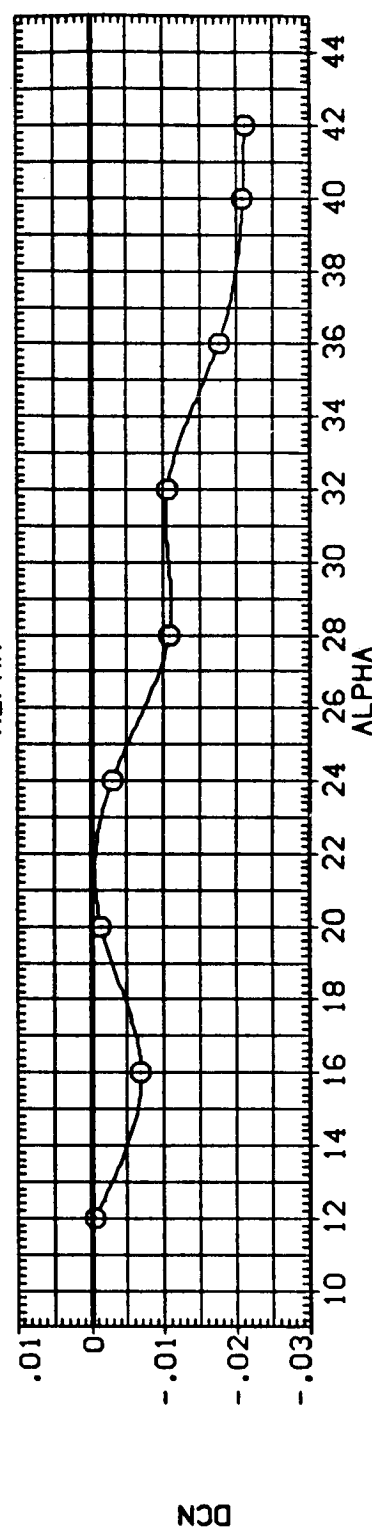
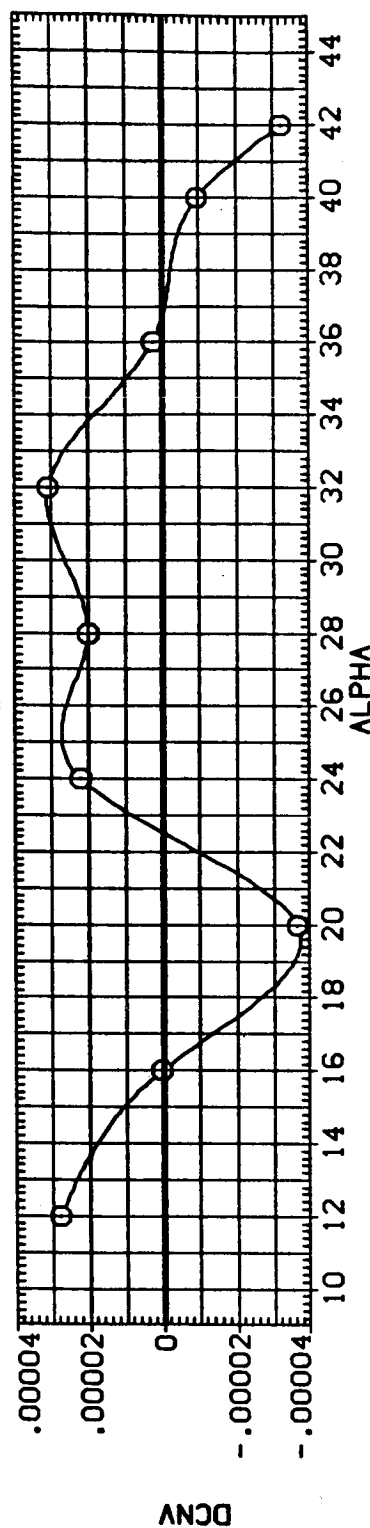
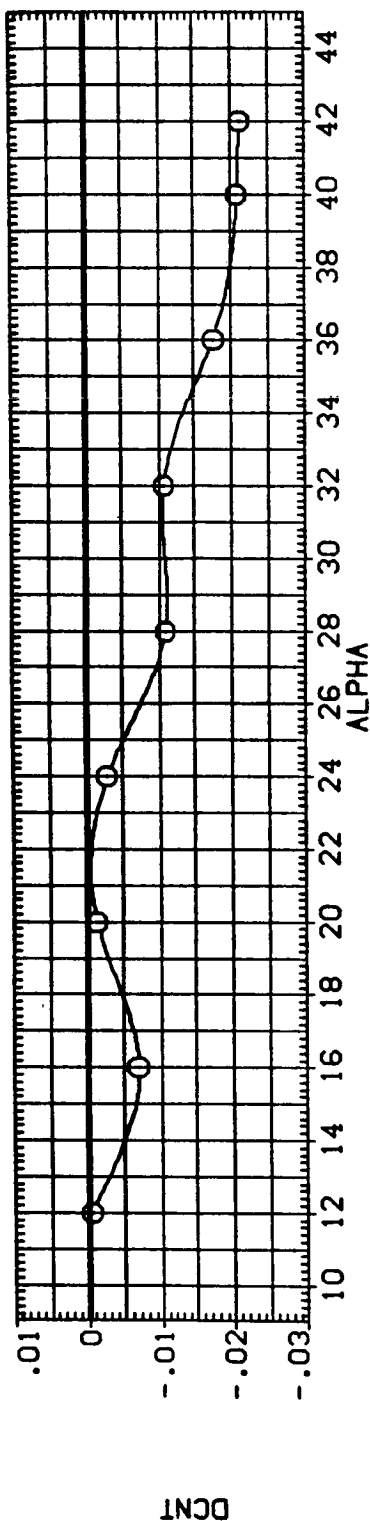


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZEQ022)

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON	SPDRK	SREF	SG.FT.	
○	10.300	.000	.000	.000	LREF	474.8000	IN.
		BOFLAP	.000	55.000	BREF	936.6800	IN.
		RUDDER	.000		XMRP	1076.7000	IN.X0
					YMRP	.0000	IN.Y0
					ZMRP	375.0000	IN.Z0
					SCALE	.0150	

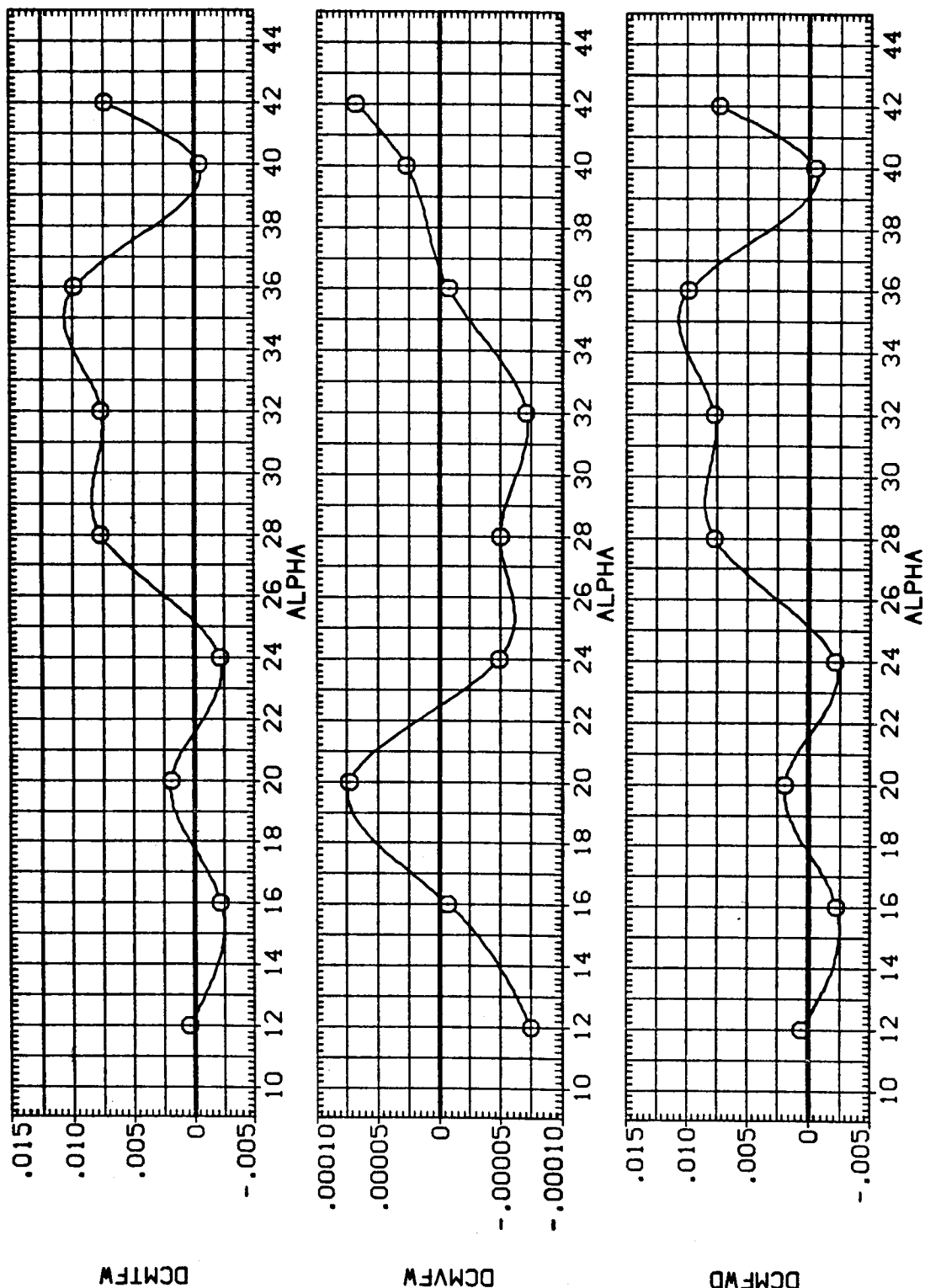


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZEQ022)

SYMBOL MACH 10.300  
 REFERENCE INFORMATION  
 SREF 2690.0000 SO.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XPRP 1076.7000 IN.X0  
 YPRP .0000 IN.Y0  
 ZPRP 375.0000 IN.Z0  
 SCALE .0150

PARAMETRIC VALUES  
 BETA .000 ELEVON .000  
 BOFLAP .000 SPOBRK 55.000  
 RUDDER .000

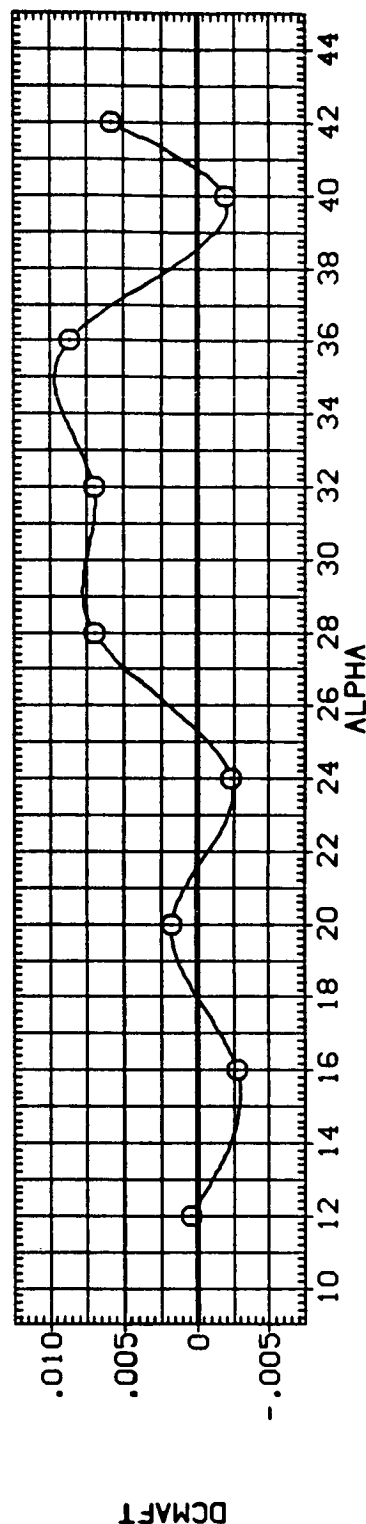
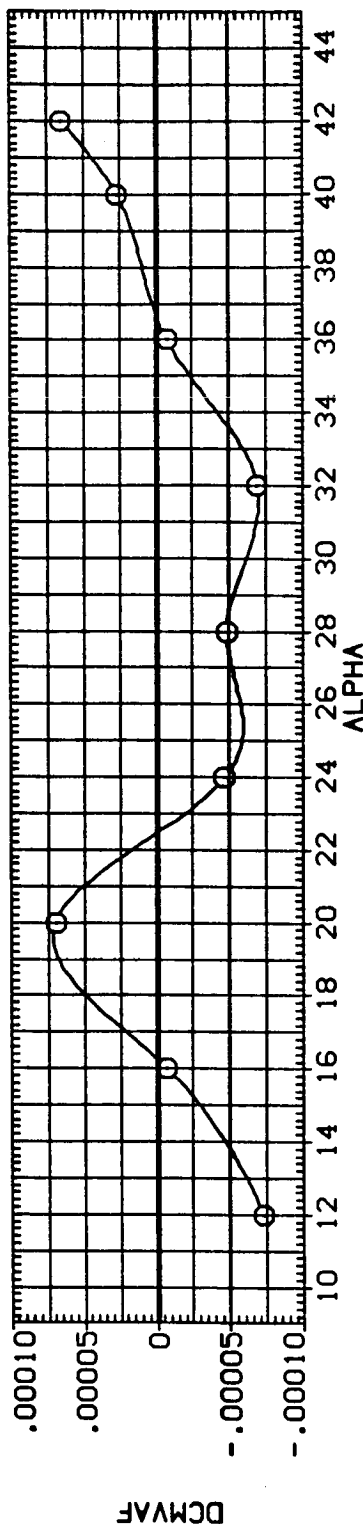
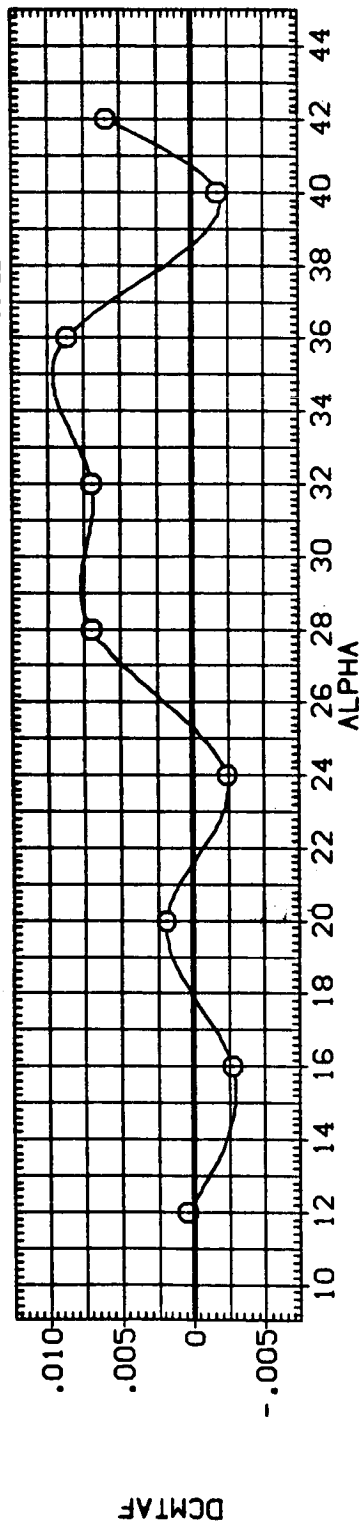


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING) (1EQ0223)

PARAMETRIC VALUES				REFERENCE INFORMATION			
SYMBOL	MACH	BETA	ELEVON	SREF	2690.0000	SQ.FT.	
O	10.300	BOFLAP	.000	LREF	474.8000	IN.	
		RUDER	.000	BREF	936.6800	IN.	
				XMRP	1076.7000	IN. X0	
				YMRP	.0000	IN. Y0	
				ZMRP	375.0000	IN. Z0	
				SCALE	.0150		

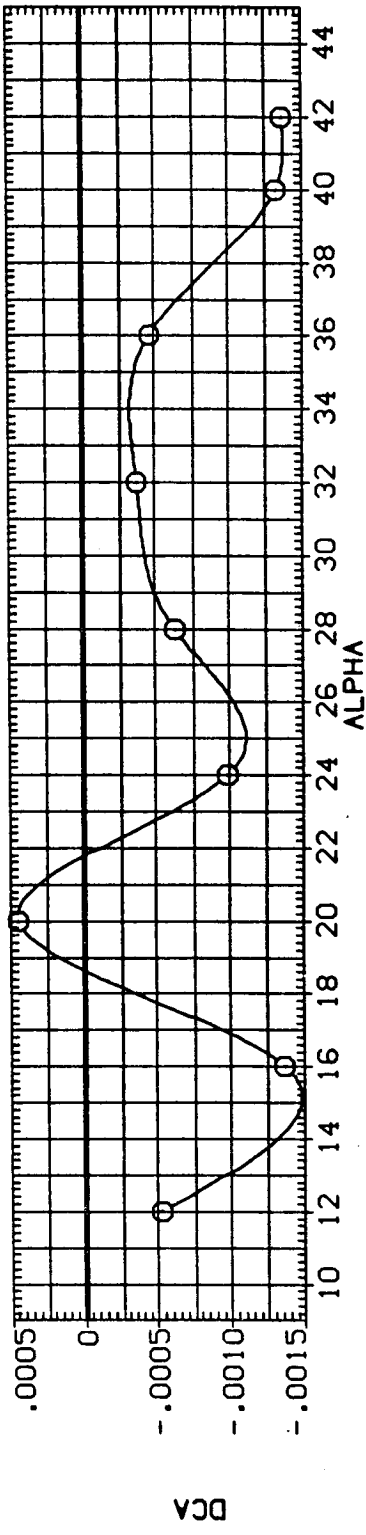
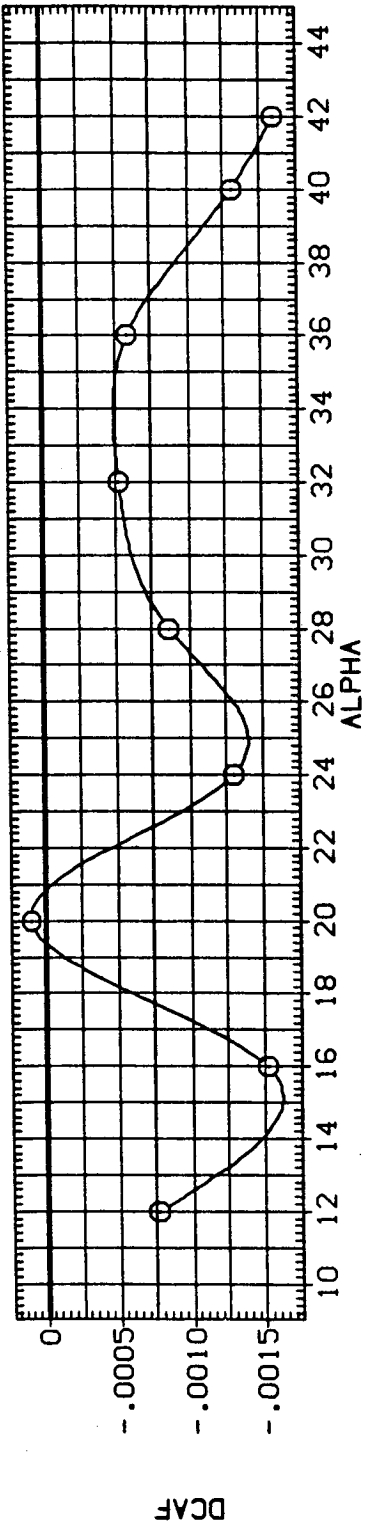
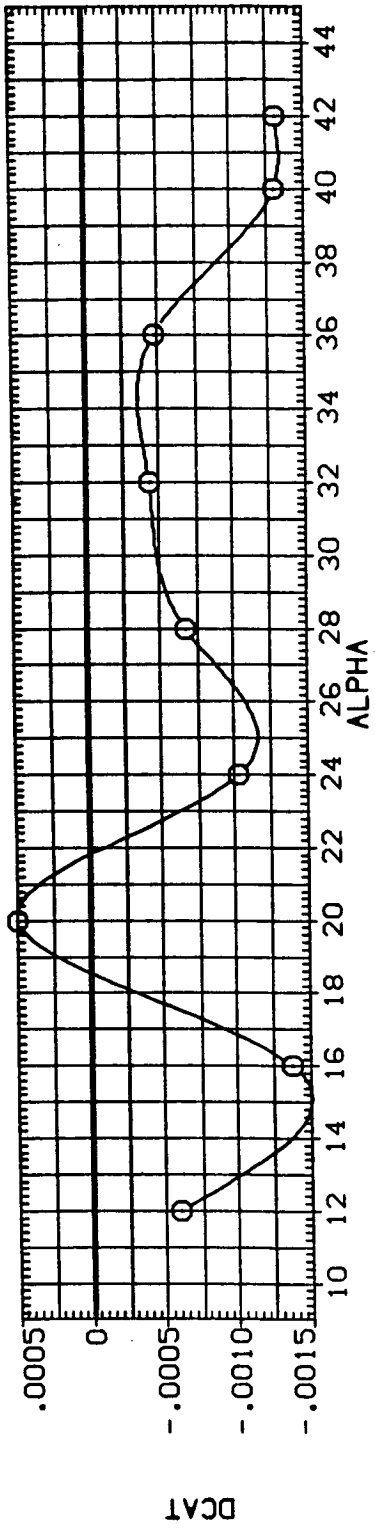


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (1EQ022)

SYMBOL MACH  
O 10.300

PARAMETRIC VALUES	
BETA	ELEVON
.000	.000
BOFLAP	SPDRK
.000	55.000
RUDDER	.000

REFERENCE INFORMATION

SREF	SO.FT.
2690.0000	IN.
474.8000	IN.
936.6800	IN.X0
1076.7000	IN.Y0
375.0000	IN.Z0
SCALE	.0150

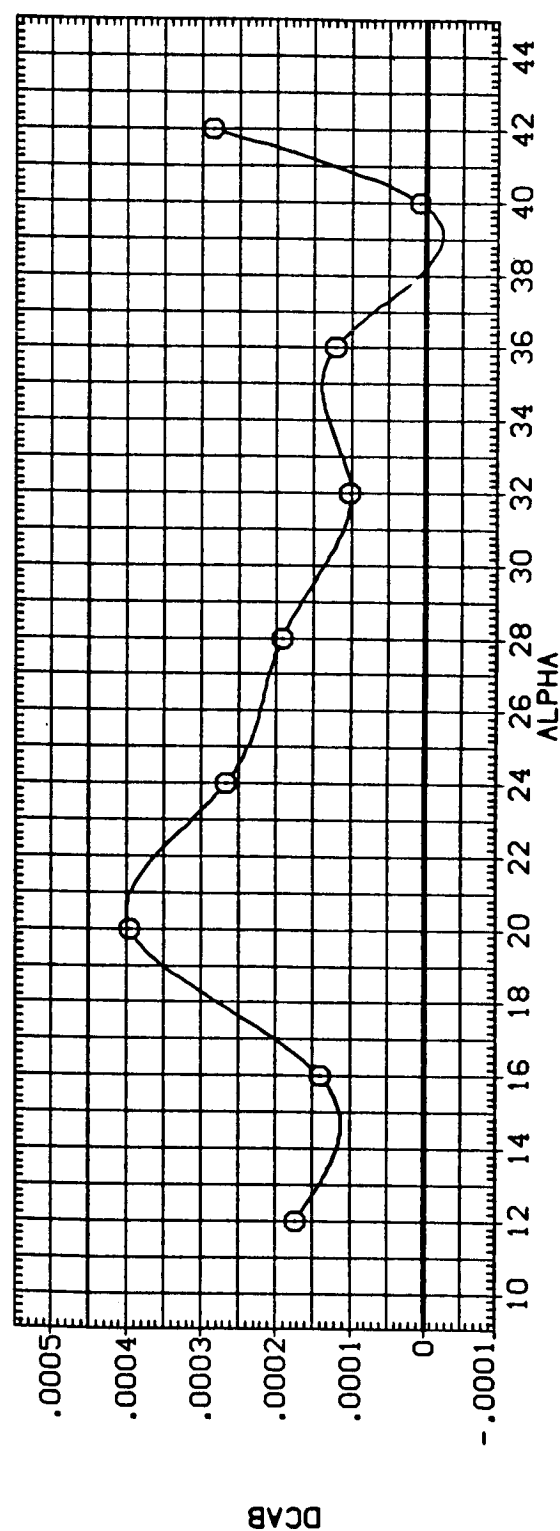
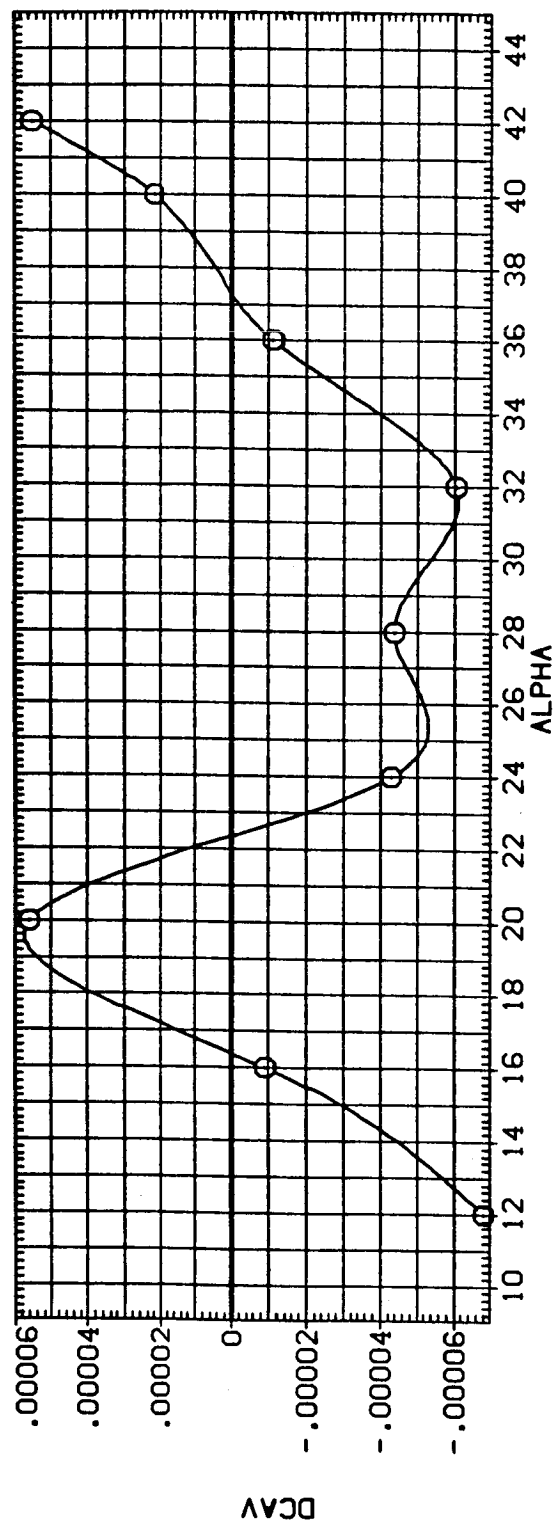


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0022)

SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
O	10.300	BETA BOFLAP RUDDER	SREF LREF BREF XMRP YMRP ZMRP SCALE
		.000 .000 .000	2690.0000 474.8000 936.6800 1076.7000 .0000 375.0000 .0150
		ELEVON SPDRBK	SO.FT. IN. IN. IN. IN. IN. IN.
		.000 .000	55.000

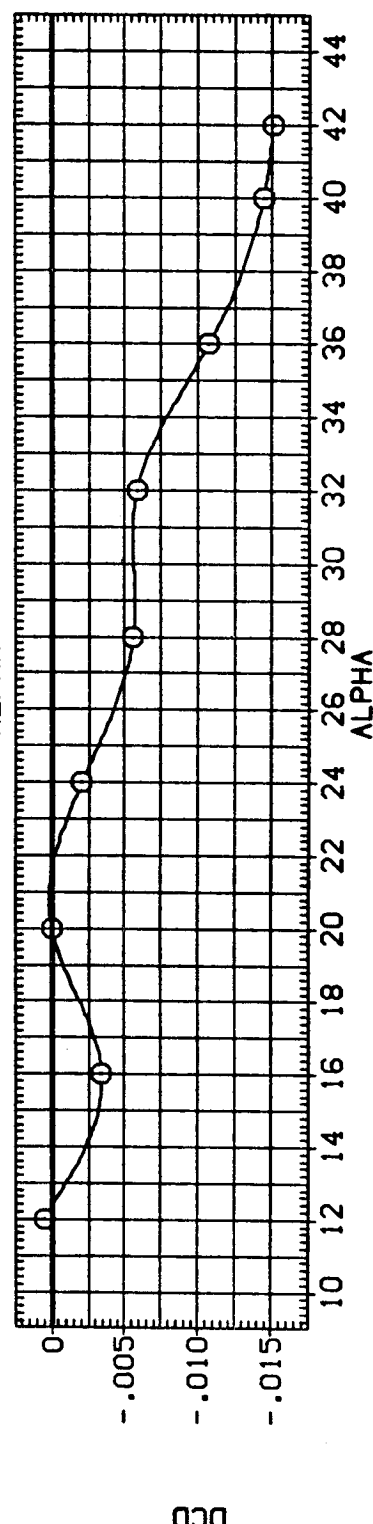
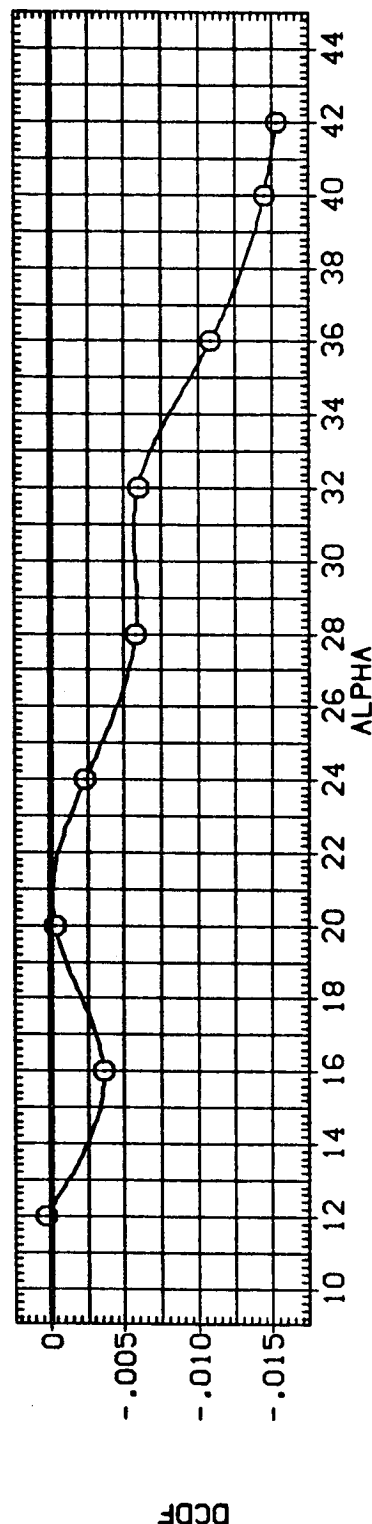
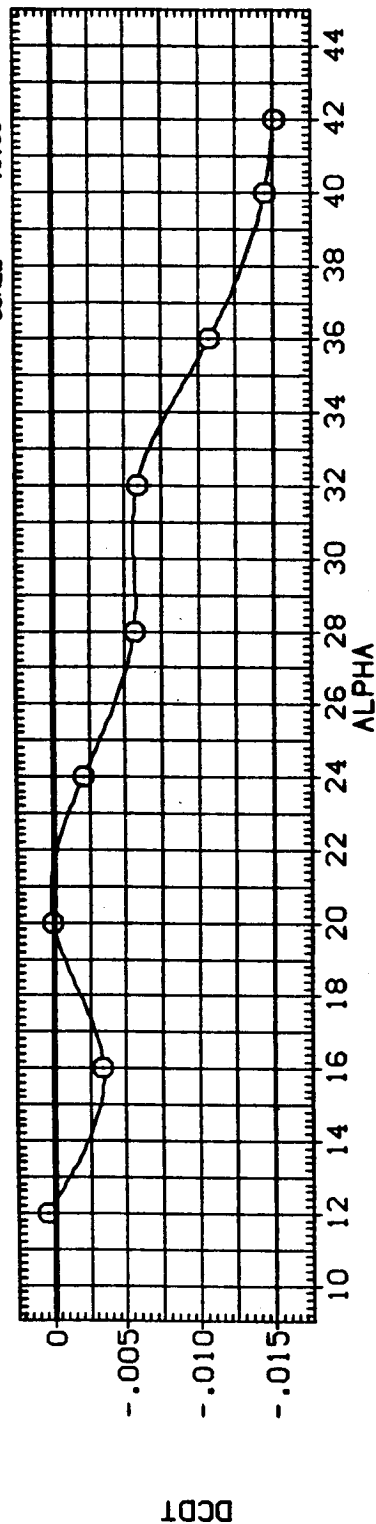


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YEQ022)

**SYMBOL** **O**

**MACH**  
**10.300**

**BETA**  
**BOFLAP**  
**RUDDER**

PARAMETRIC VALUES	
ELEVON	.000
SPDRBK	.000
	.000

**55,000**  
**.000**

REFERENCE INFORMATION	
SREF	2690.0000
LREF	474.8000
BREF	936.6800
XMRP	1076.7000
YMRP	.0000
ZMRP	375.0000
SCALE	.0150

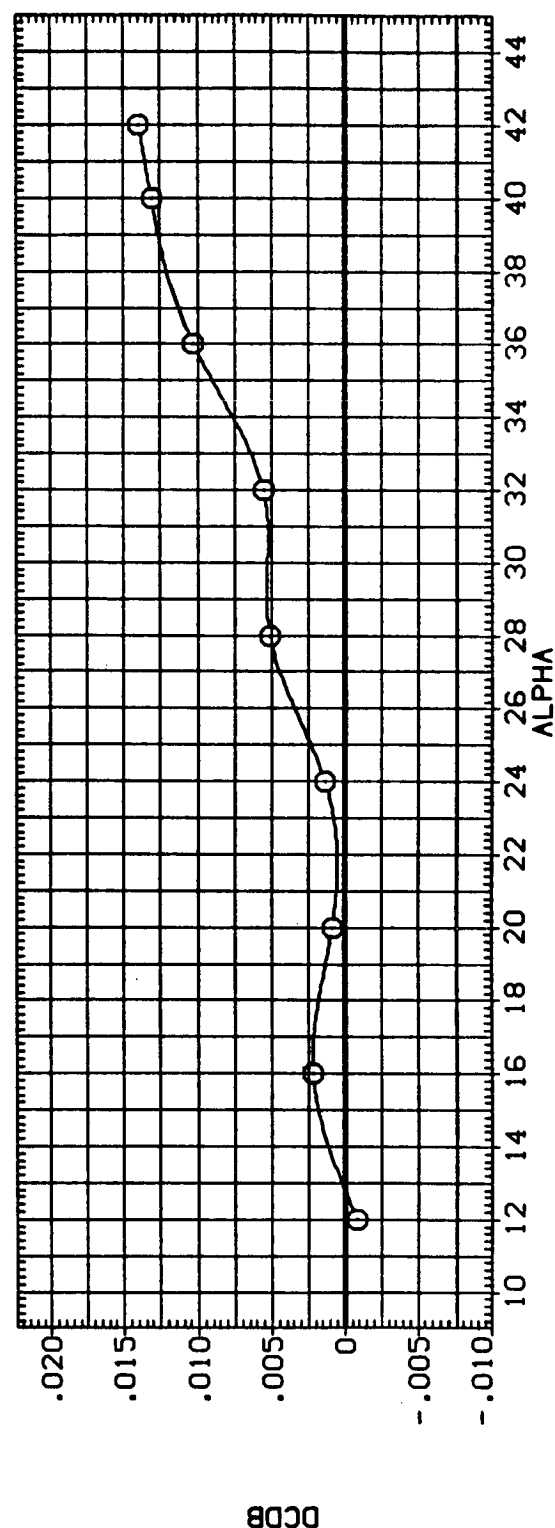
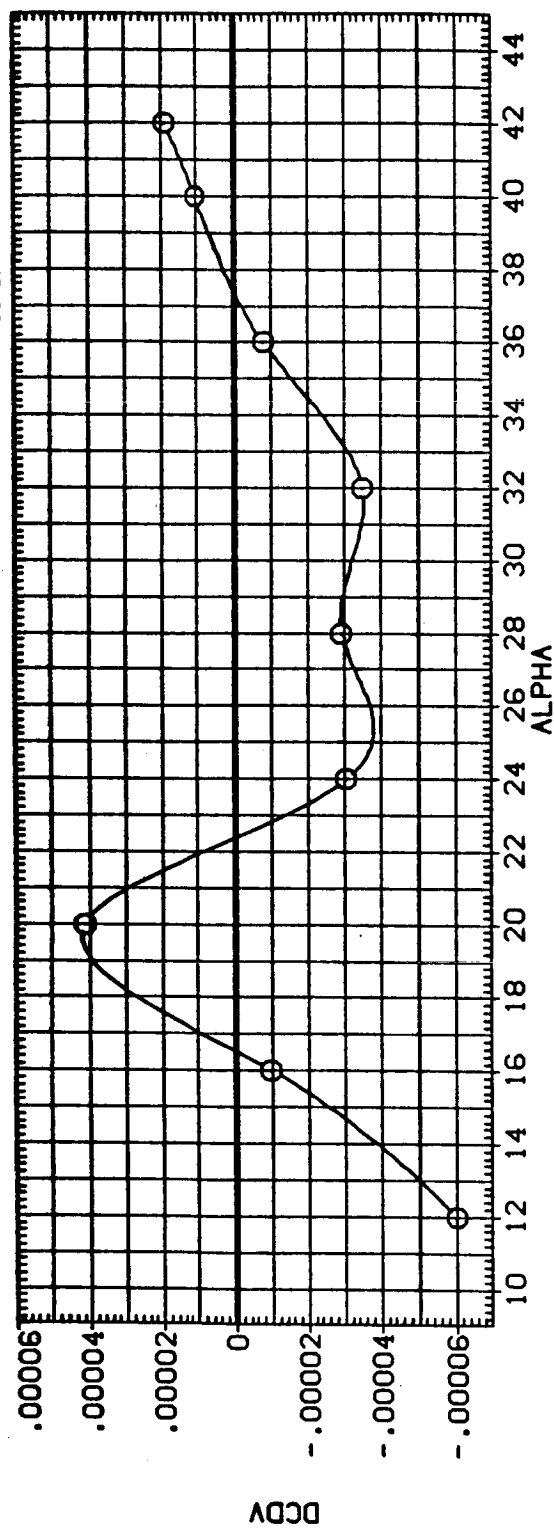


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AEG0006)	AMES 3.5-190 DA98 (011-17-M14)	.000	.000	.000	55.000	SREF 2690.0000 SQ.FT.
(AEG0022)	AMES 3.5-190 DA98 (011-17-M14-N24-DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XD
						YMRP .0000 IN.YD
						ZMRP 375.0000 IN.ZD
						SCALE .0150

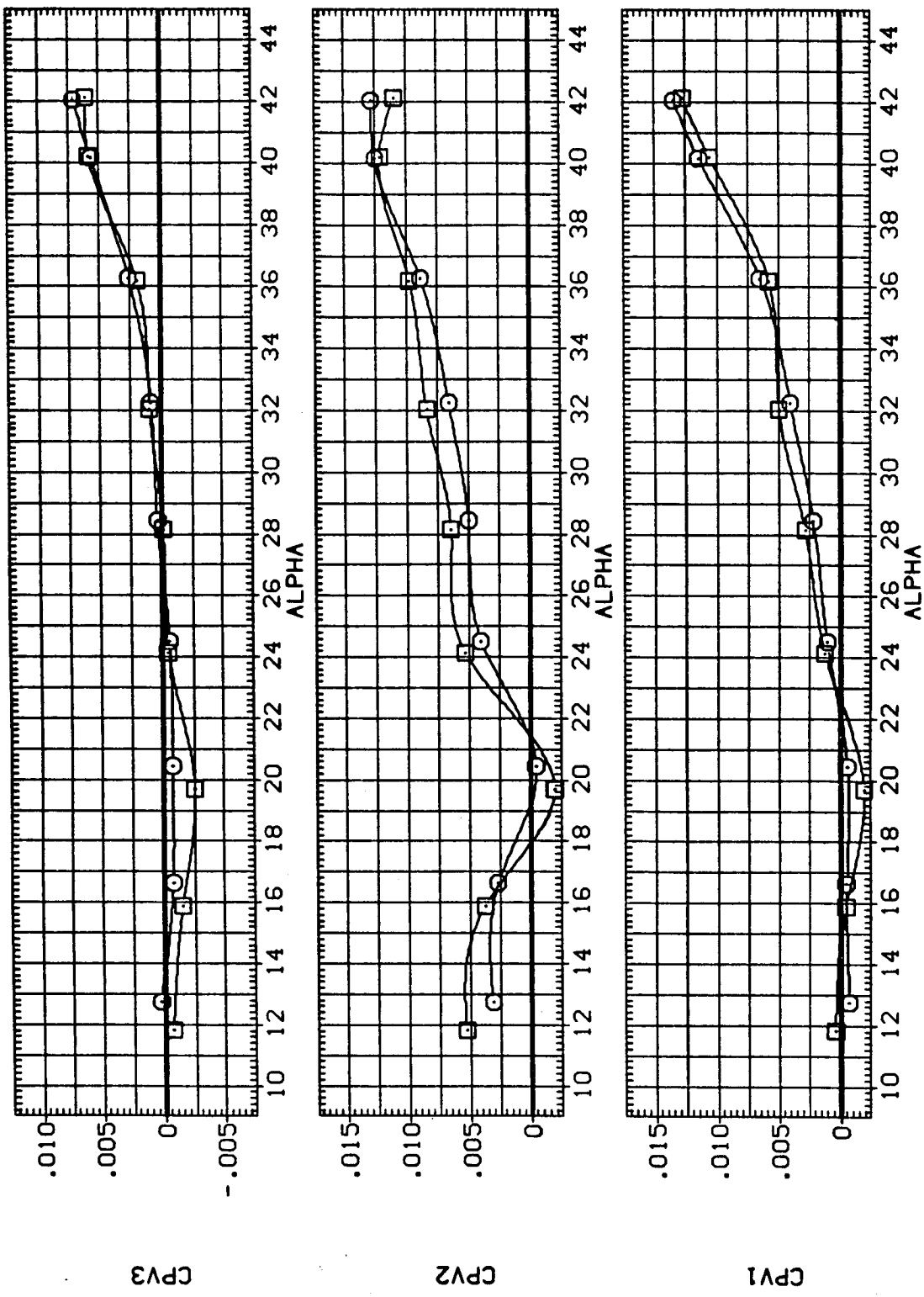


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(AED006)	AMES 3.5-190 OA98 (011-47-M14)	.000	.000	.000	55.000	SREF 2690.0000 50.FT.
(AED022)	AMES 3.5-190 OA98 (011-47-M14-N24-DUMMY STING)	.000	.000	.000	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

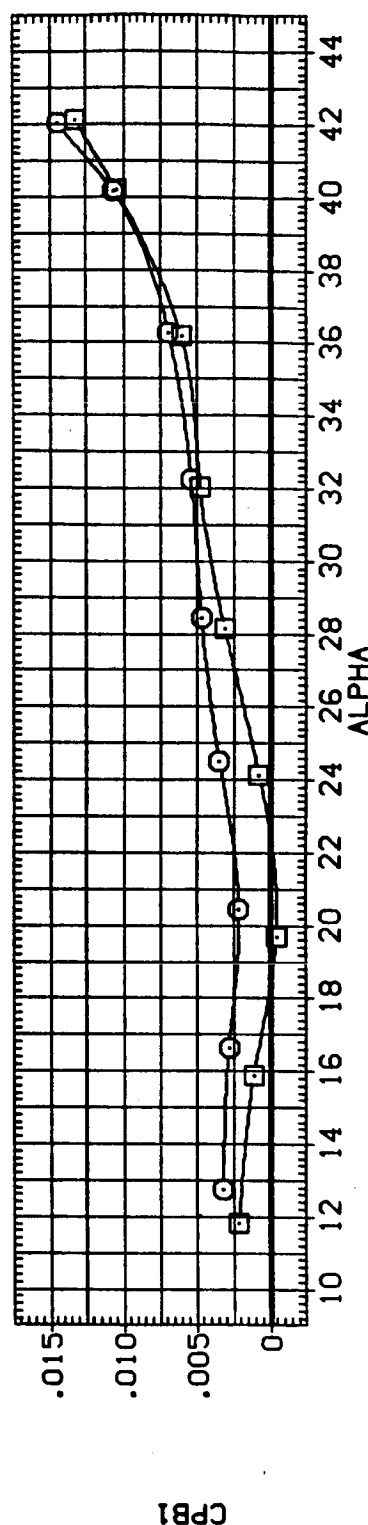
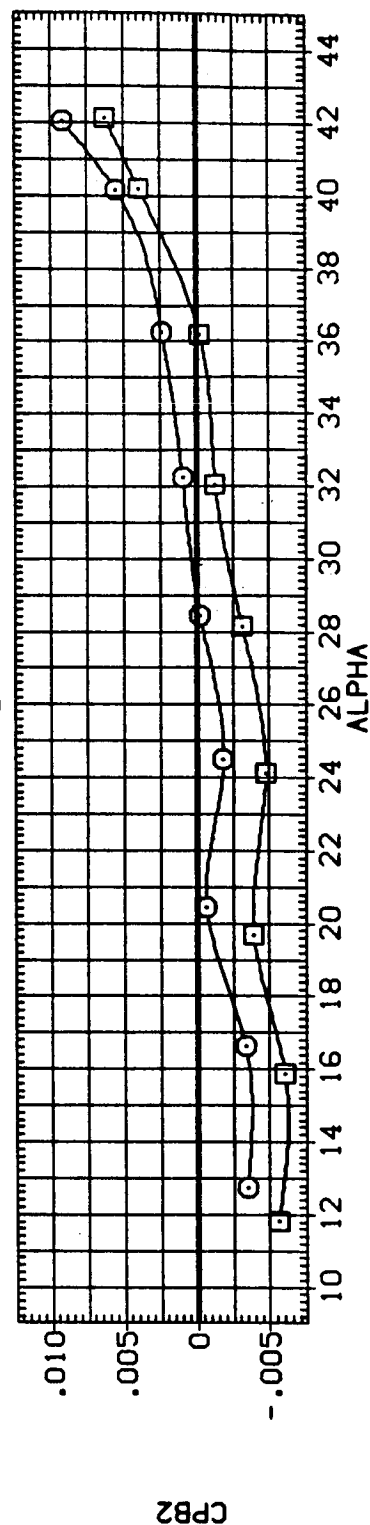
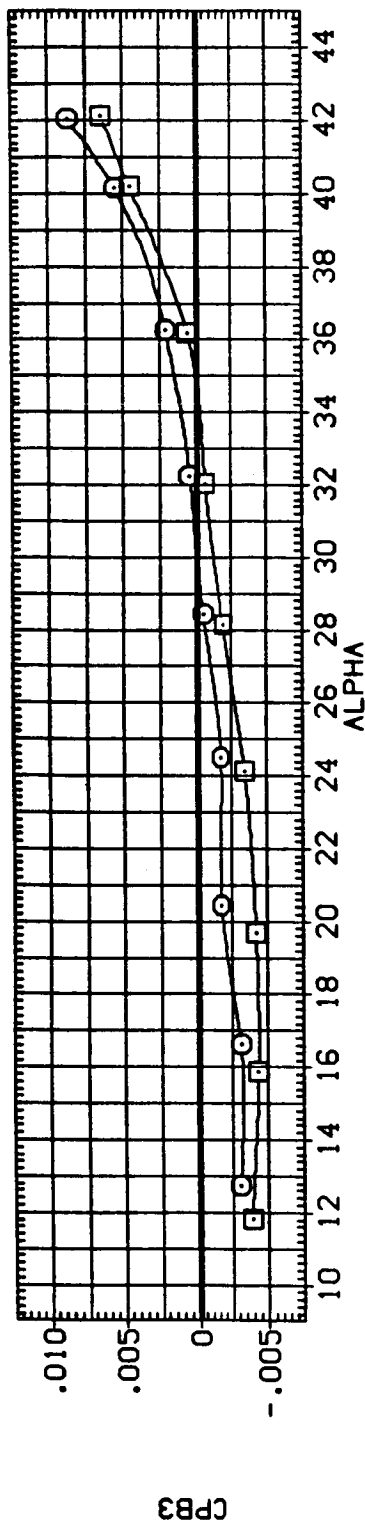


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(CE0008)	AMES 3.5-190 OA98 (011-M7+M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0012)	AMES 3.5-190 OA98 (011-M7+M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0024)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XPRP 1076.7000 IN.X0
						YPRP .0000 IN.Y0
						ZPRP .0000 IN.Z0
						SCALE .0150

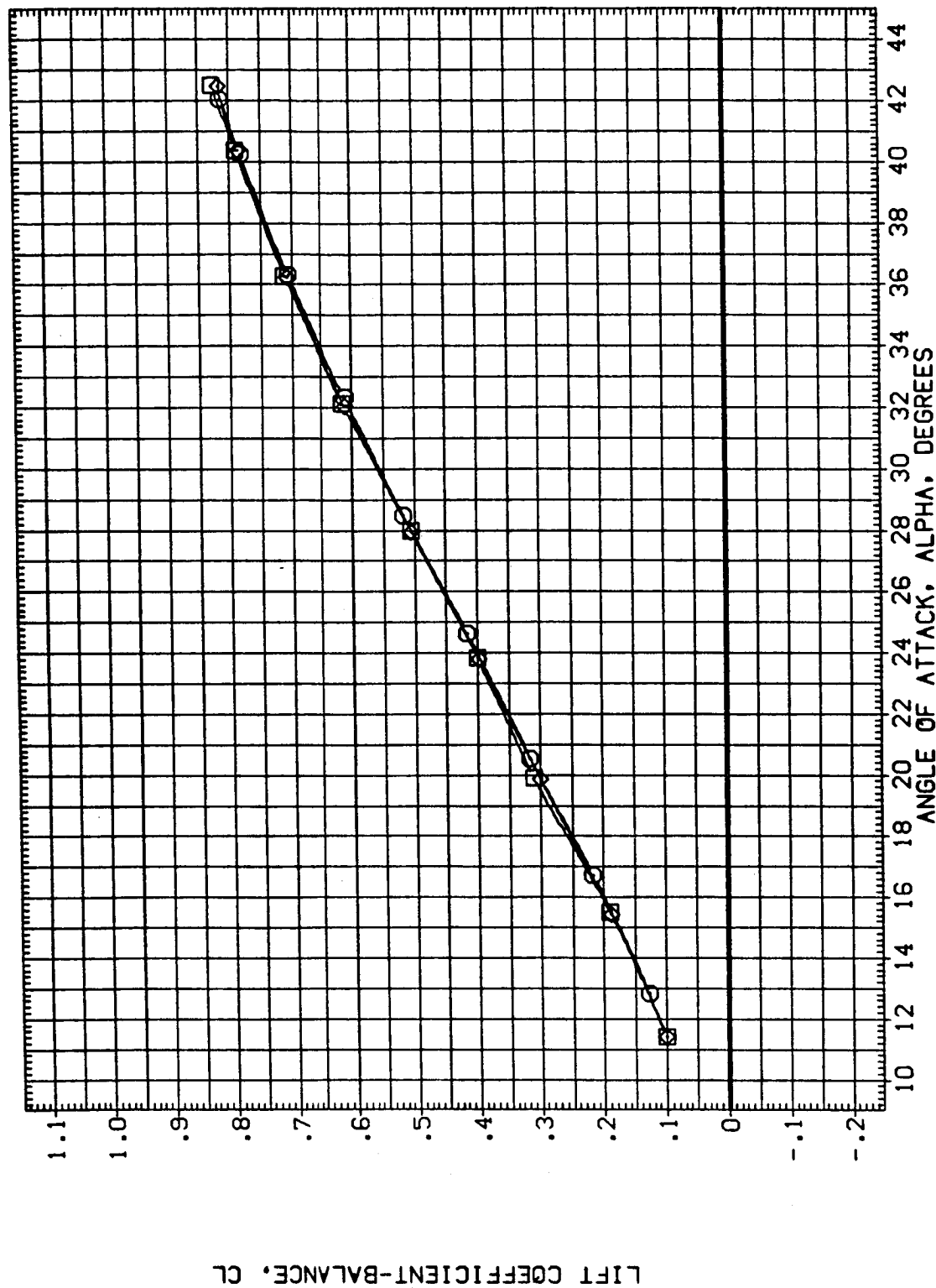


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0008)	AMES 3.5-190 0A98 (011-47-414)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0012)	AMES 3.5-190 0A98 (011-47-414-424)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0024)	AMES 3.5-190 0A98 (011-47-414-424+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XREF 1076.7000 IN.X0
						YREF .0000 IN.Y0
						ZREF 375.0000 IN.Z0
						SCALE .0150

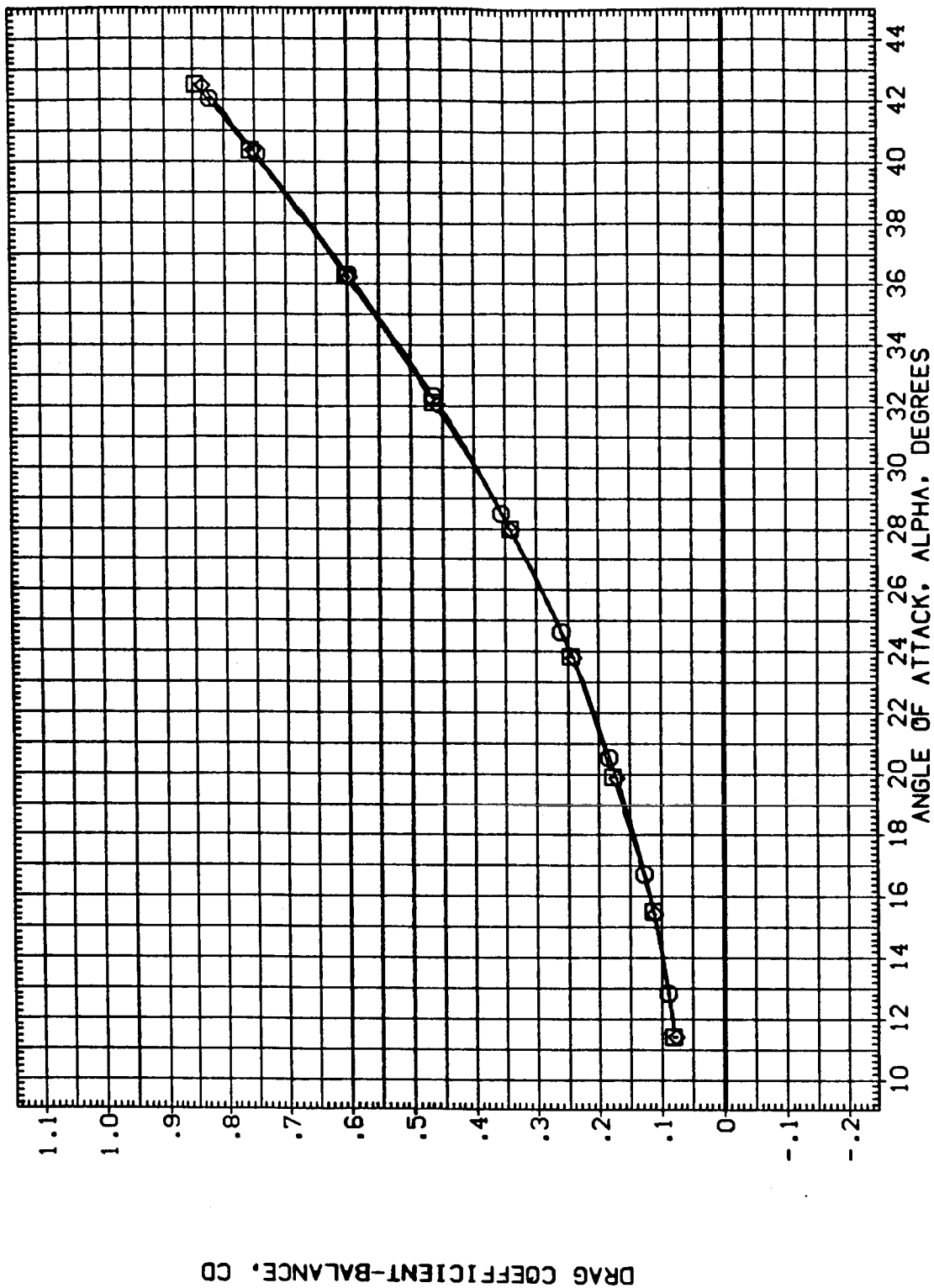


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0008)	AVES 3.5-190 0A98 (011-47+114)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0012)	AVES 3.5-190 0A98 (011-47+114-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0024)	AVES 3.5-190 0A98 (011-47+114-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6900 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP .0150 IN. Z0

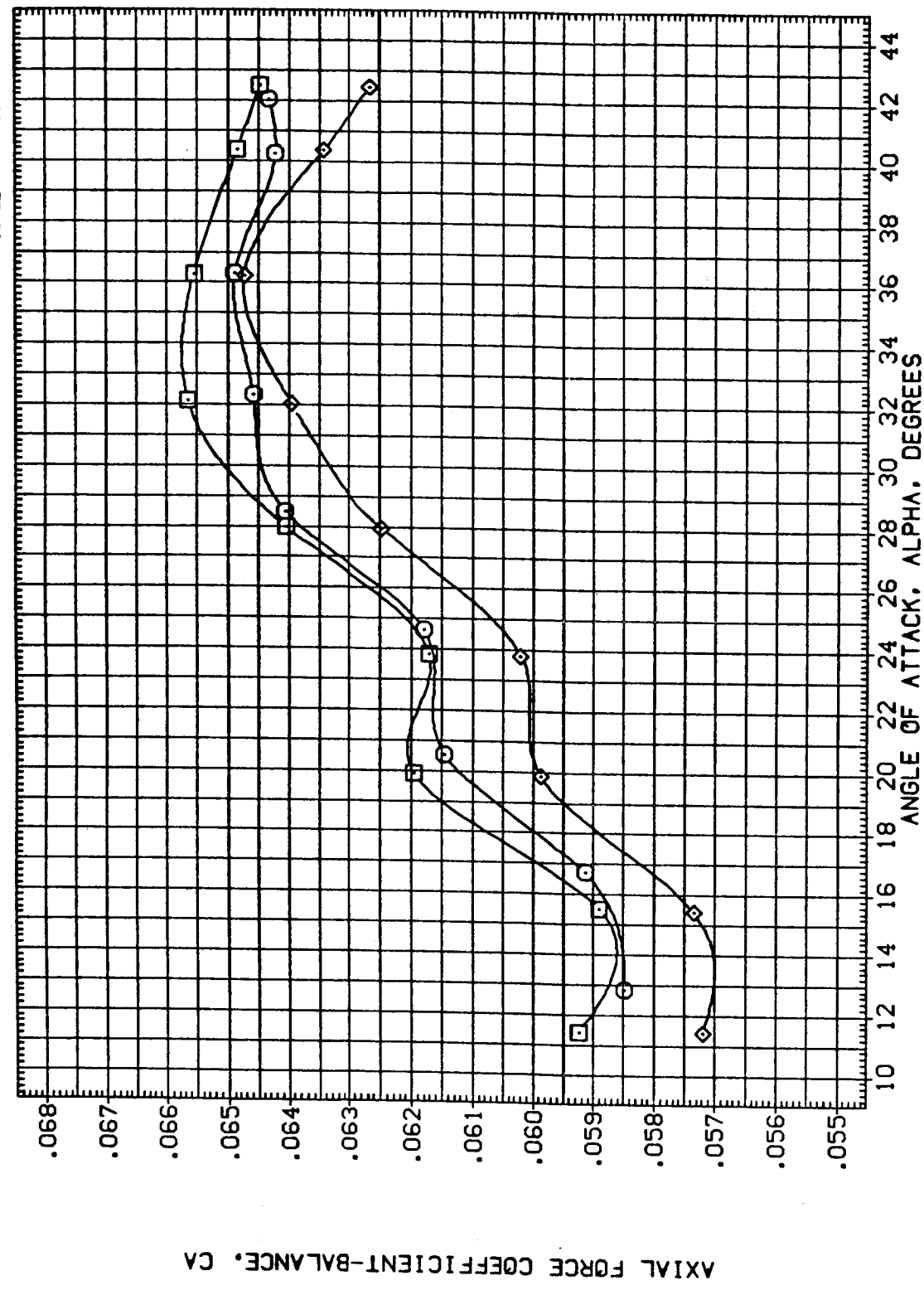
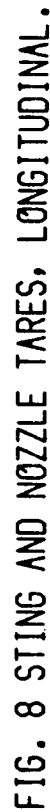


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMWD



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DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(CE0008)	AVES 3.5-190 0A98 (011-M7+H14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0012)	AVES 3.5-190 0A98 (011-M7+H14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0024)	AVES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X8
						YMRP .0000 IN.Y8
						ZMRP 375.0000 IN.Z8
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-BALANCE, CLMFT

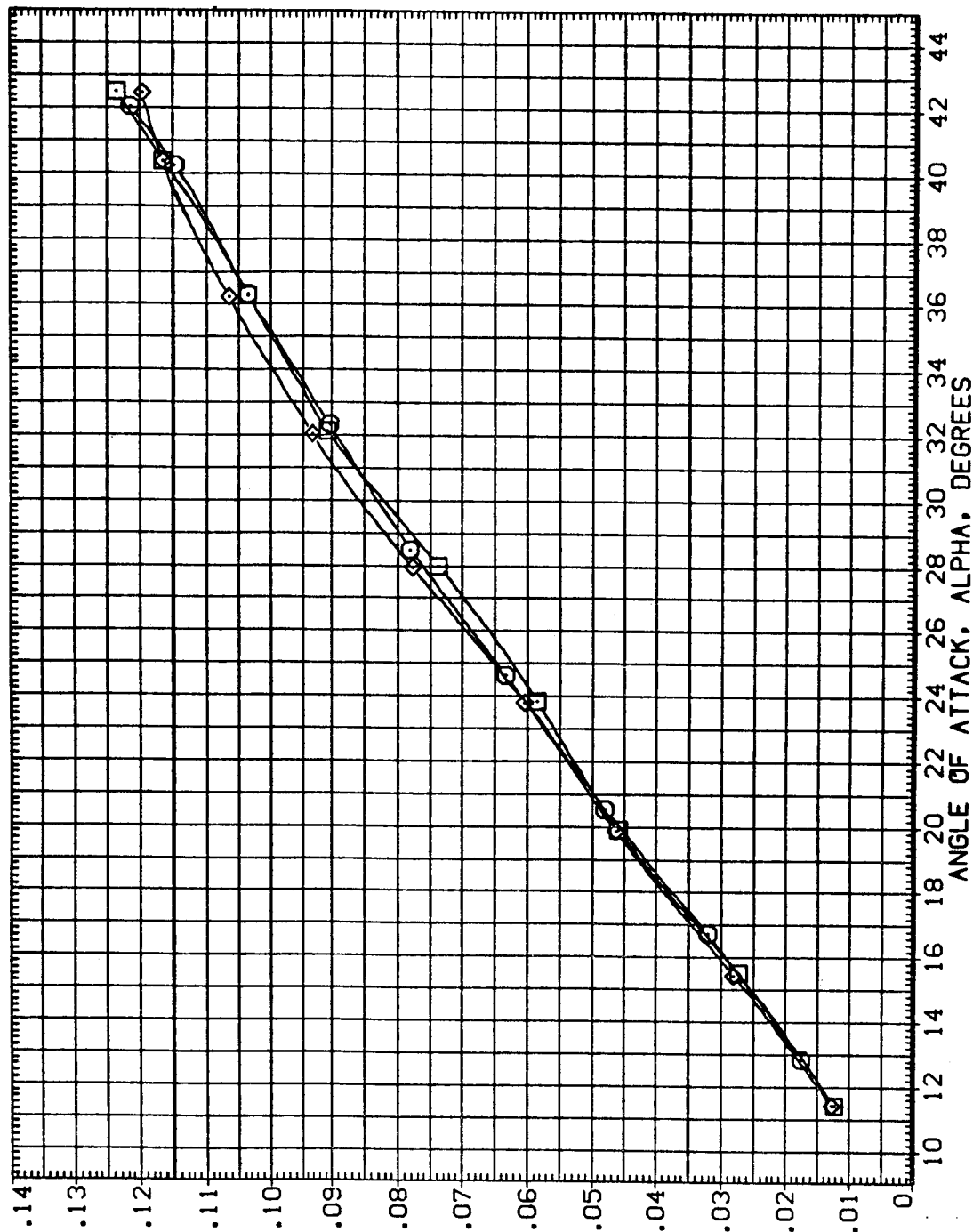


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	80FLAP	SPODBRK	REFERENCE INFORMATION
(CE0008)	AVES 3.5-190 0A98 (011-47-H14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0012)	AVES 3.5-190 0A98 (011-47-H14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0024)	AVES 3.5-190 0A98 (011-47-H14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6000 IN.
						XMRP 1076.7000 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150

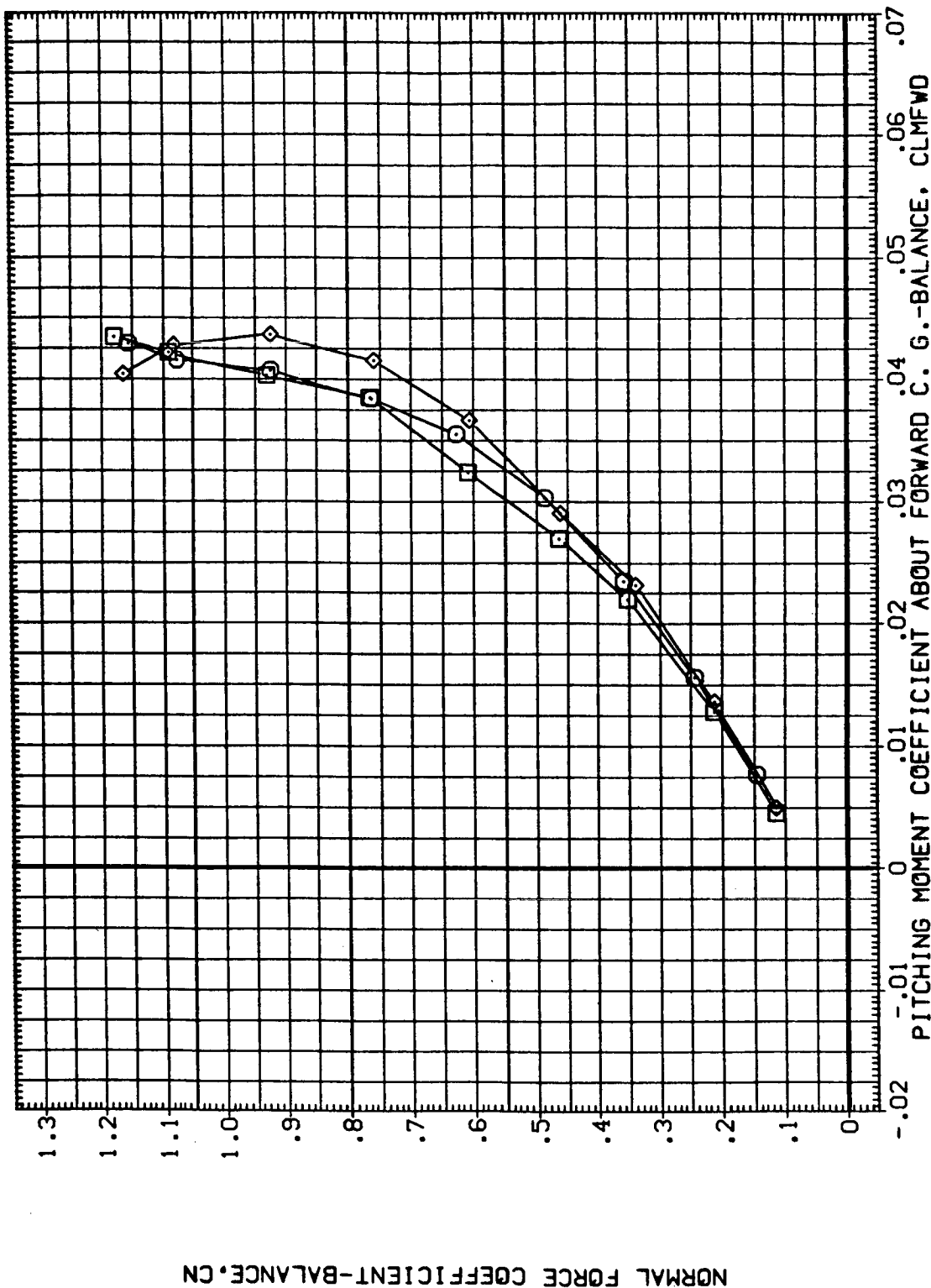


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SP08RK	REFERENCE INFORMATION
(CE0008)	AMES 3.5-190 0A98 (011-M7-M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0012)	AMES 3.5-190 0A98 (011-M7-M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(CE0024)	AMES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6900 IN.
						XPRP 1076.7000 IN.XB
						YPRP .0000 IN.YB
						ZPRP .0000 IN.ZB
						SCALE .0150

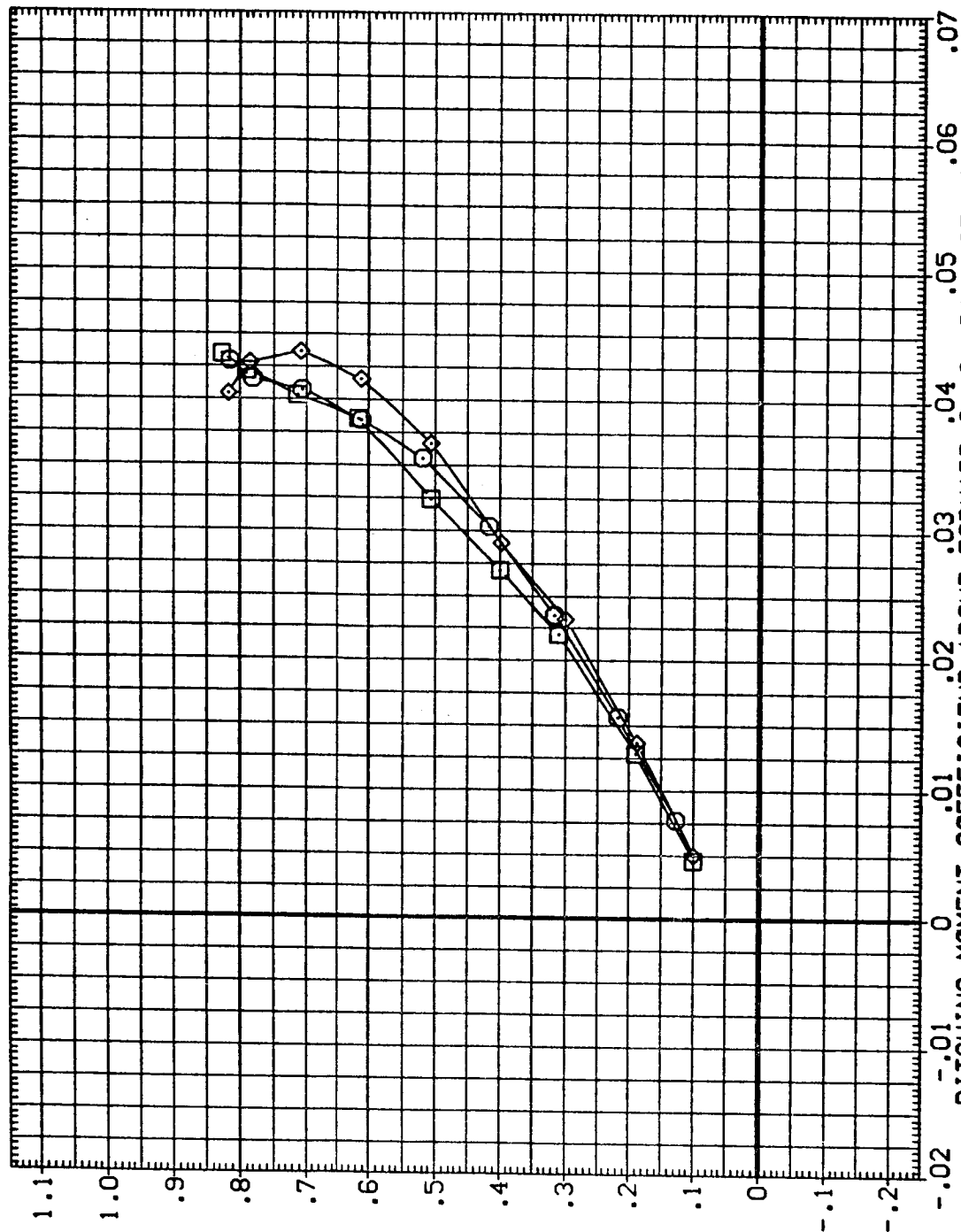


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

( $AMACH = 10.27$ )

DATA SET SYMBOL  
(CE0008)  
(CE0012)  
(CE0024)

CONFIGURATION DESCRIPTION  
AVES 3.5-190 0A98 (011-M7+H14)  
AVES 3.5-190 0A98 (011-M7+H14-N24)  
AVES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)

BETA  
5.000  
5.000  
5.000

ELEVON  
-40.000  
-40.000  
-40.000

BOFLAP  
-11.700  
-11.700  
-11.700

SPDRK  
55.000  
55.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.XB  
YMRP .0000 IN.YB  
ZMRP 375.0000 IN.ZB  
SCALE .0150

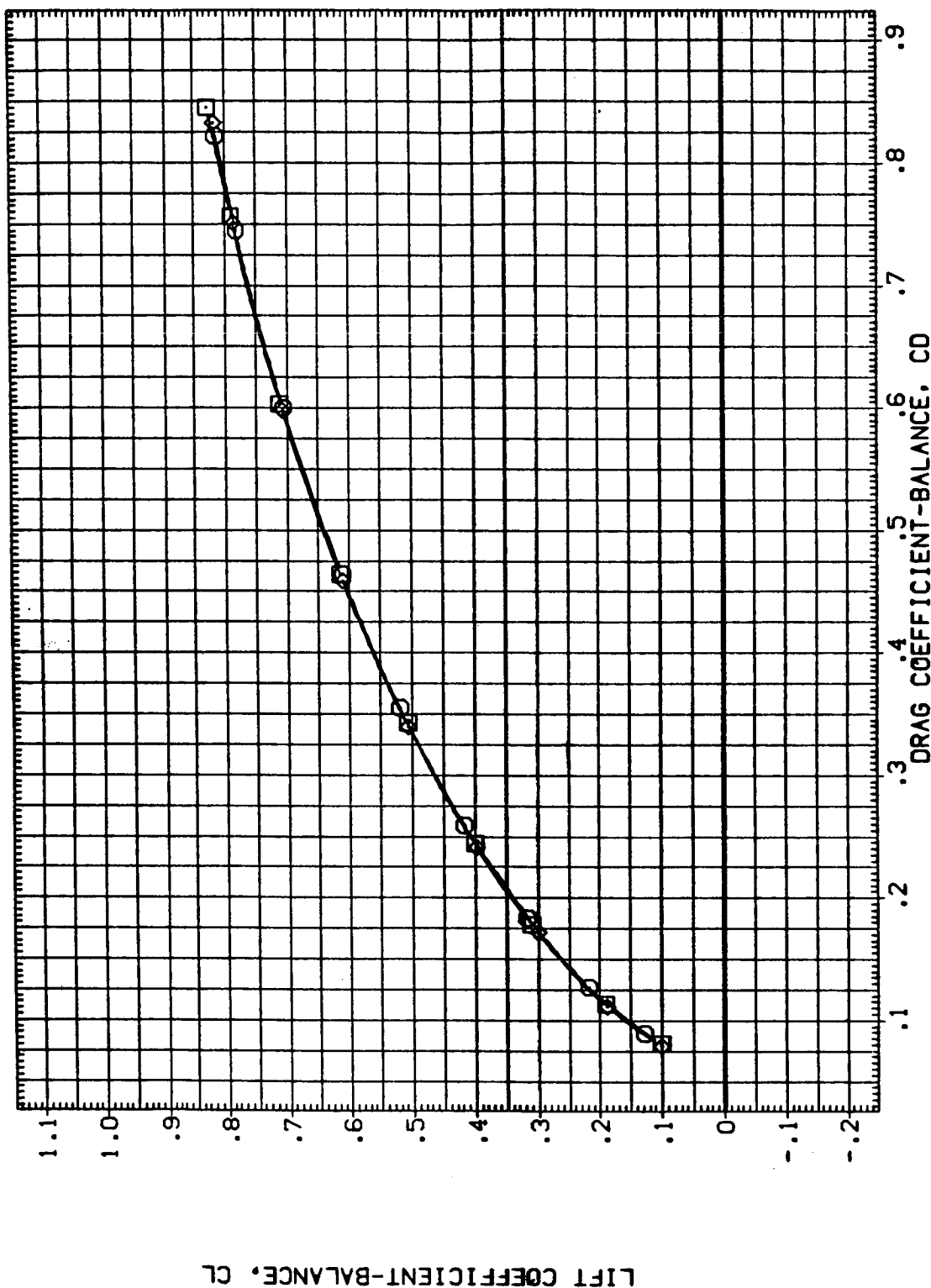


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0008)	AMES 3.5-190 0A98 (011-47+M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0012)	AMES 3.5-190 0A98 (011-47+M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0024)	AMES 3.5-190 0A98 (011-47+M14-N24+JUNNY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.
						YMRP .0000 IN.
						ZMRP 375.0000 IN.
						SCALE .0150

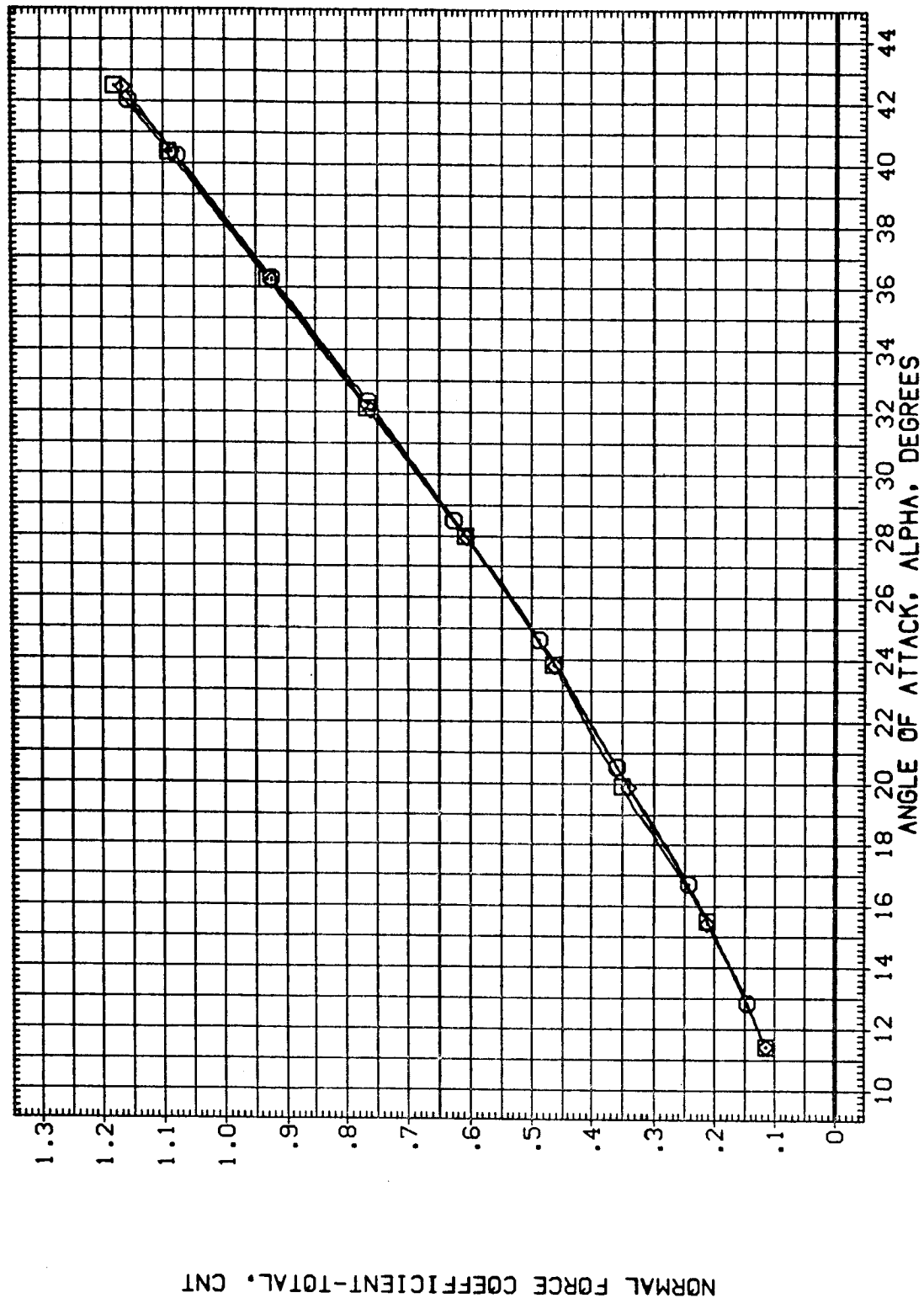


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(EE0008)	AVES 3.5-190 0A98 (011-M7-M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0012)	AVES 3.5-190 0A98 (011-M7-M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0024)	AVES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X8
						YMRP 375.0000 IN.Y8
						ZMRP 0.0150
						SCALE

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMFW

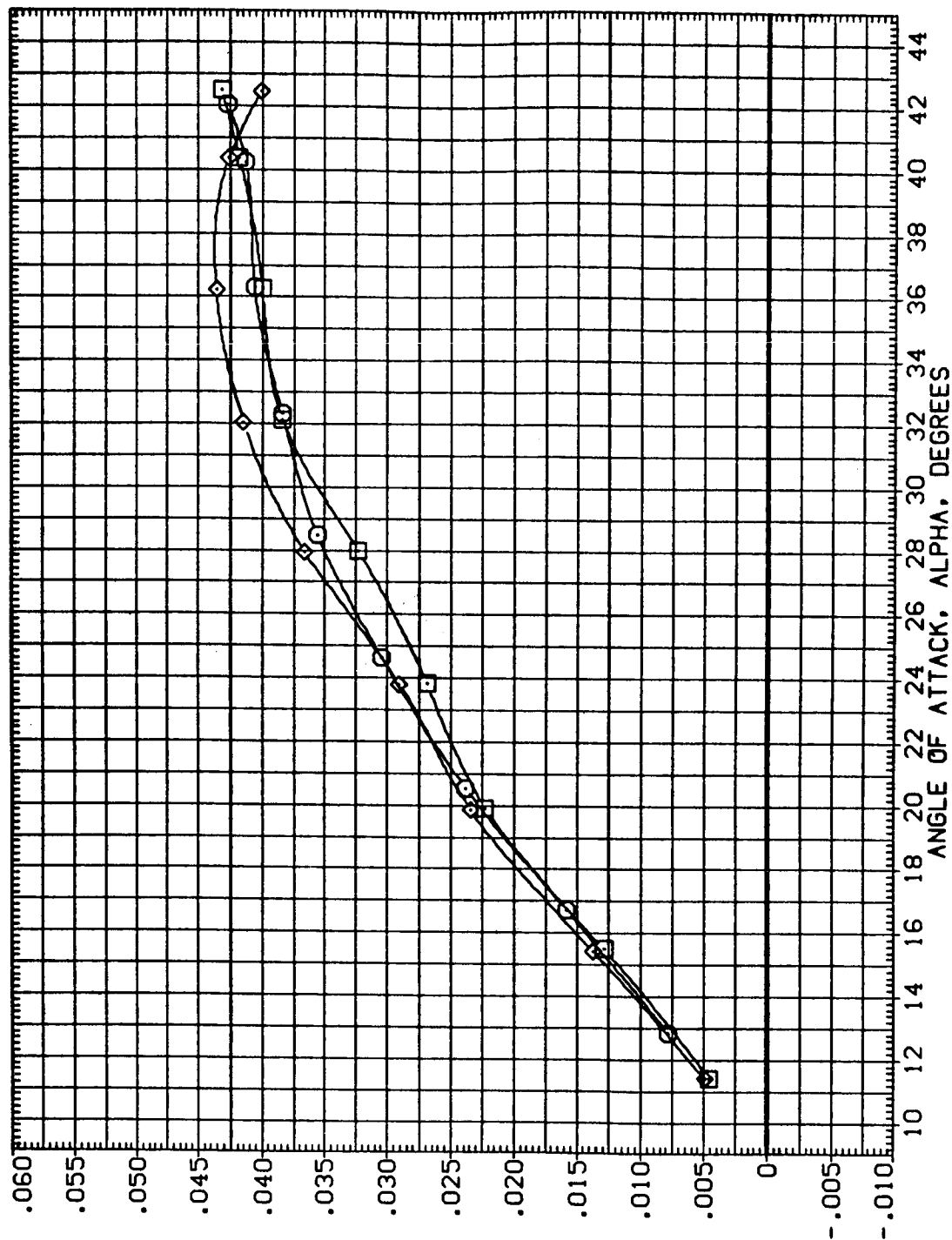


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27





DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0008)	AVES 3.5-190 0A98 (011-H7-M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0012)	AVES 3.5-190 0A98 (011-H7-M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0024)	AVES 3.5-190 0A98 (011-H7-M14-N24-DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

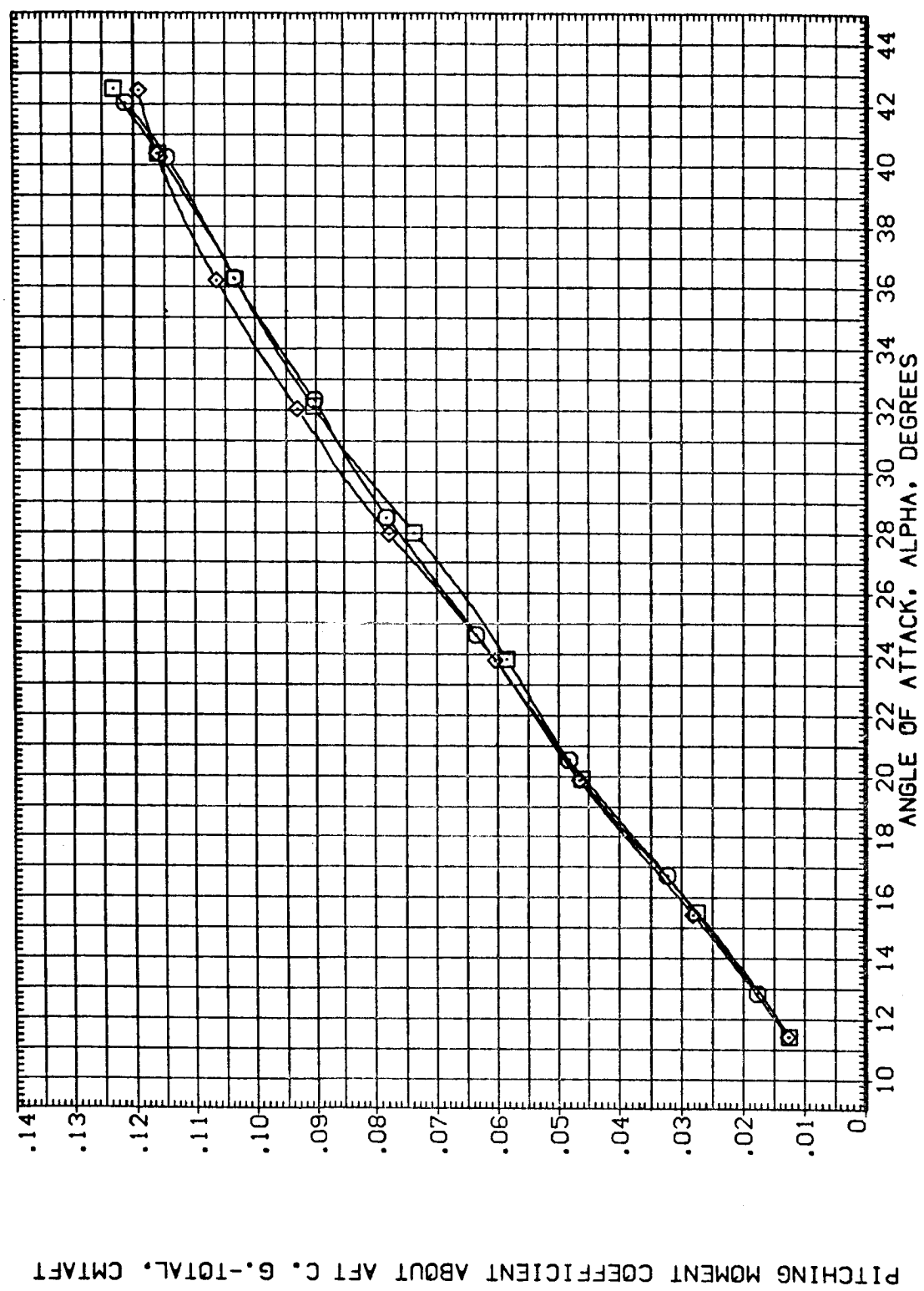


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(EEQ008) AMES 3.5-190 0A98 (011-M7-M14)

(EEQ012) AMES 3.5-190 0A98 (011-M7-M14-N24)

(EEQ024) AMES 3.5-190 0A98 (011-M7-M14-N24+JUNNY STING)

BETA 5.000

ELEVON -40.000

BOFLAP -11.700

SPDRK 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8000 IN.

BREF 936.6800 IN.

XMRP 1076.7000 IN.X0

YMRP .0000 IN.Y0

ZMRP 375.0000 IN.Z0

SCALE .0150

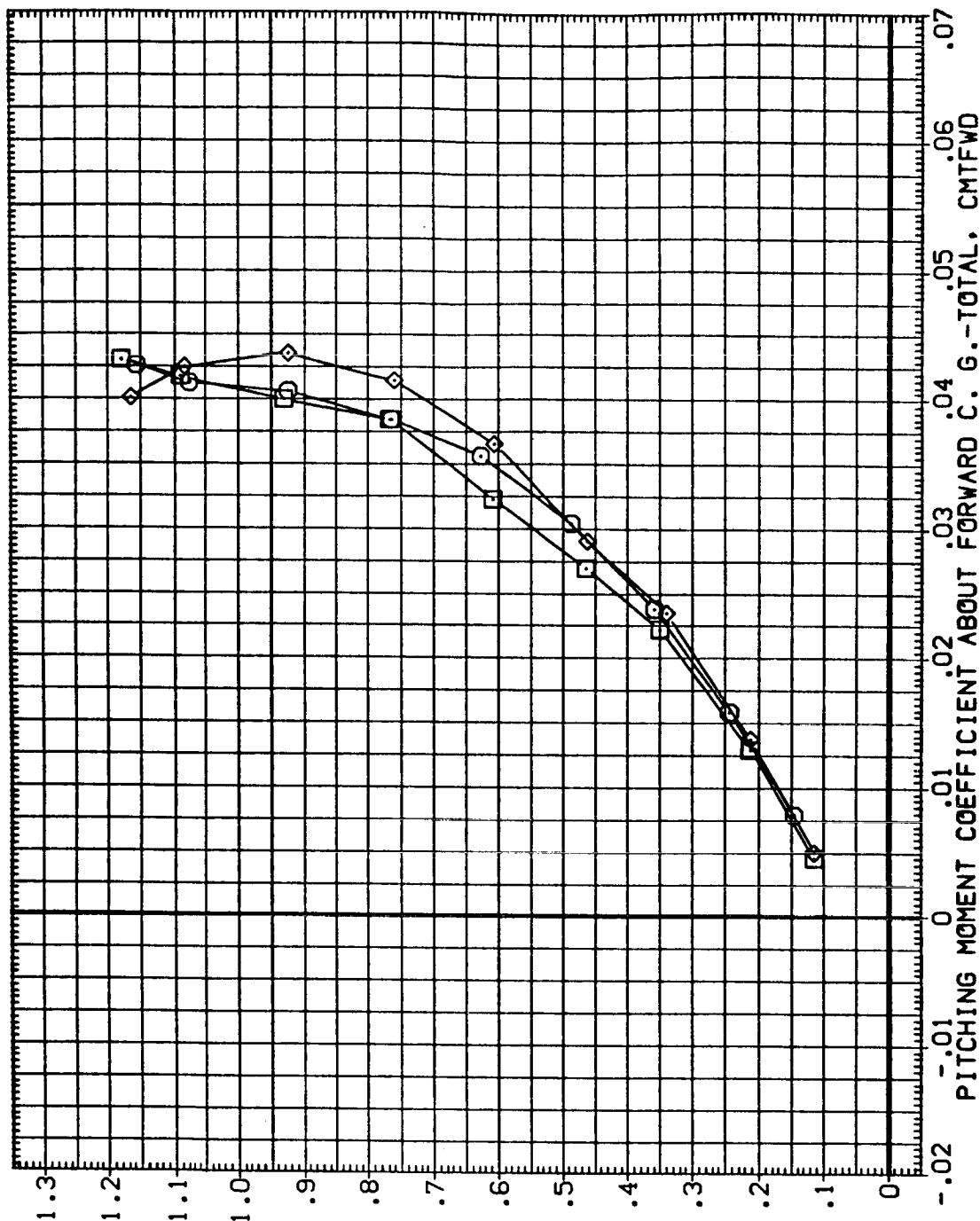


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPDRBK	REFERENCE INFORMATION
(EE0008)	AVES 3.5-190 0A98 (011-M7+M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0012)	AVES 3.5-190 0A98 (011-M7+M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0024)	AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X9
						YMRP .0000 IN.Y9
						ZMRP .0000 IN.Z9
						SCALE .0150

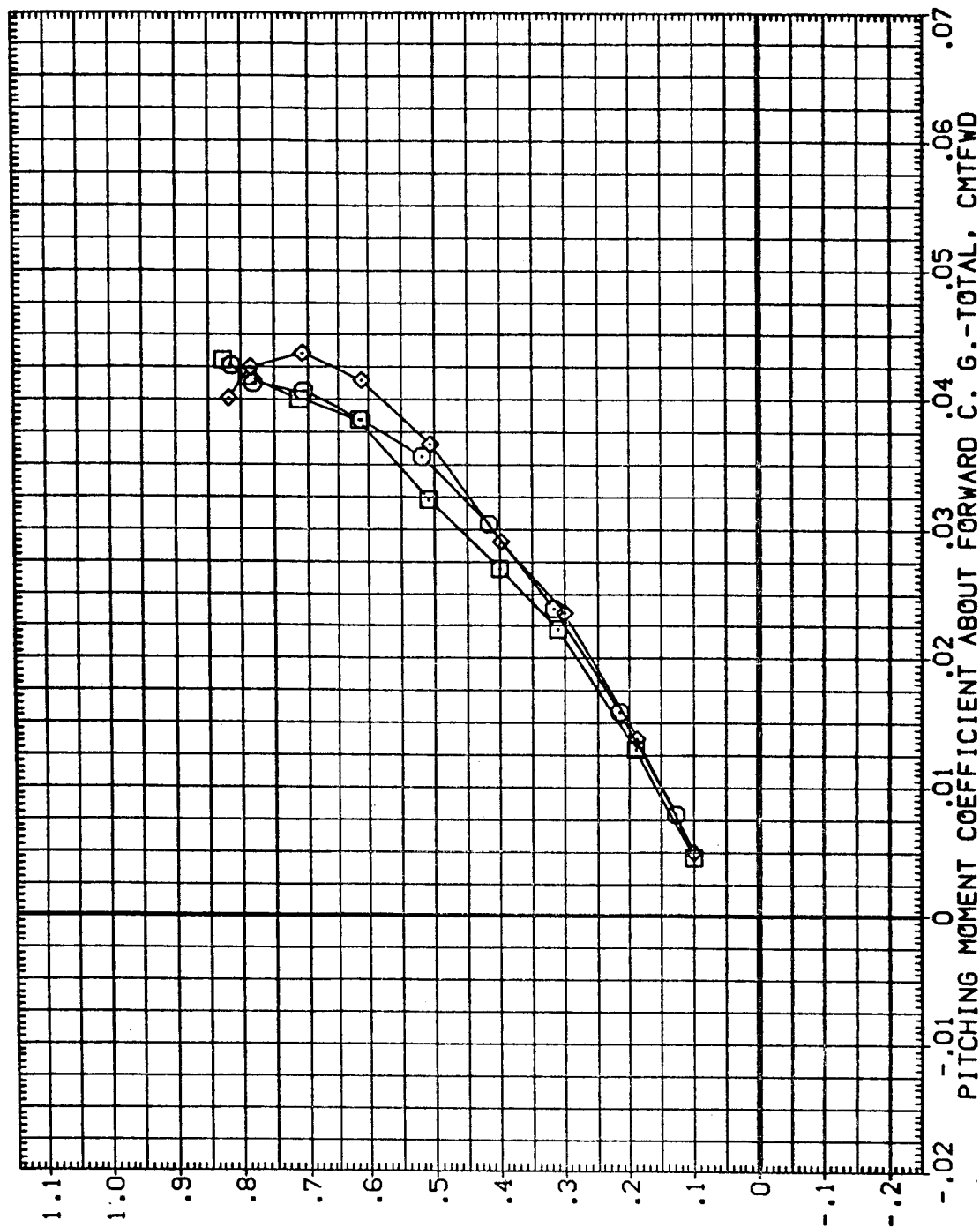


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0008)	AMES 3.5-190 D498 (011-M7-M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0012)	AMES 3.5-190 D498 (011-M7-M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0024)	AMES 3.5-190 D498 (011-M7-M14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.XD
						YPRP 1076.7000 IN.YD
						ZPRP .0000 IN.ZD
						SCALE 375.0150

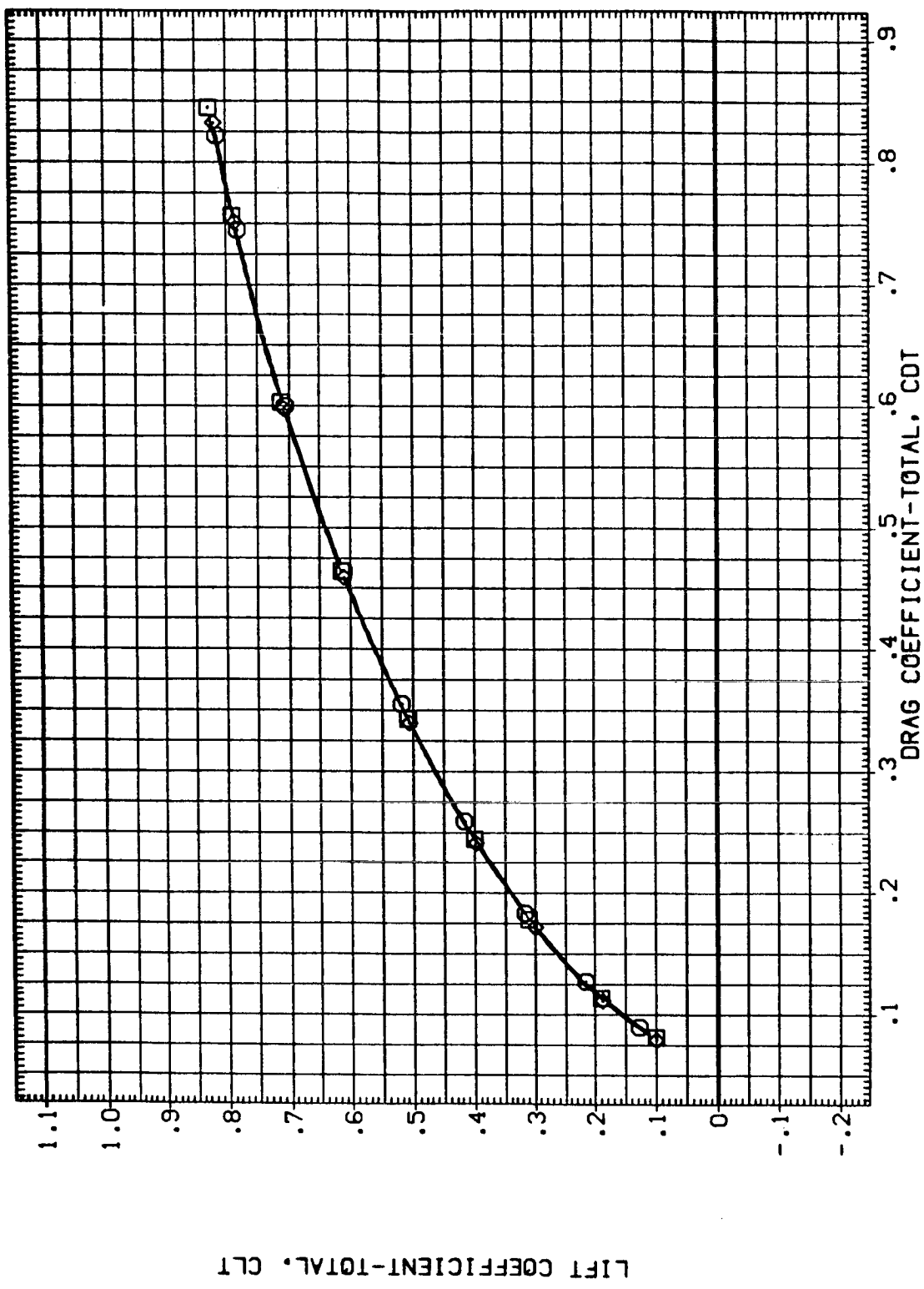


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(EE0008)	AMES 3.5-190 0A98 (011-47-M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 50.FT.
(EE0012)	AMES 3.5-190 0A98 (011-47-M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0024)	AMES 3.5-190 0A98 (011-47-M14-N24+JUNNY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

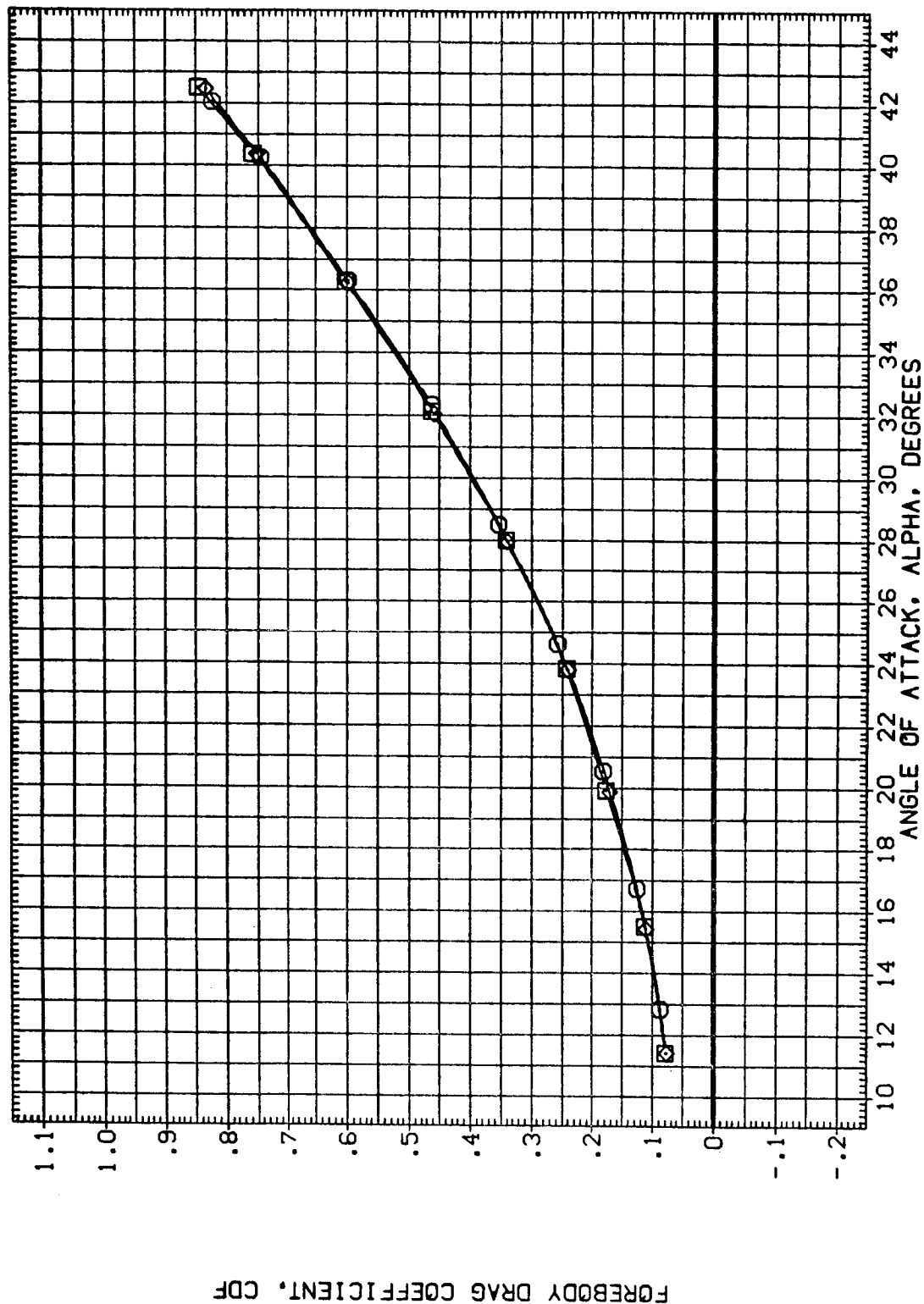


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0008)	AVES 3.5-190 CA98 (011-17-M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0012)	AVES 3.5-190 CA98 (011-17-M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0024)	AVES 3.5-190 CA98 (011-17-M14-N24+JUNNY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XPRP 1076.7000 IN.XB
						YPRP .0000 IN.YB
						ZPRP 375.0000 IN.ZB
						SCALE .0150

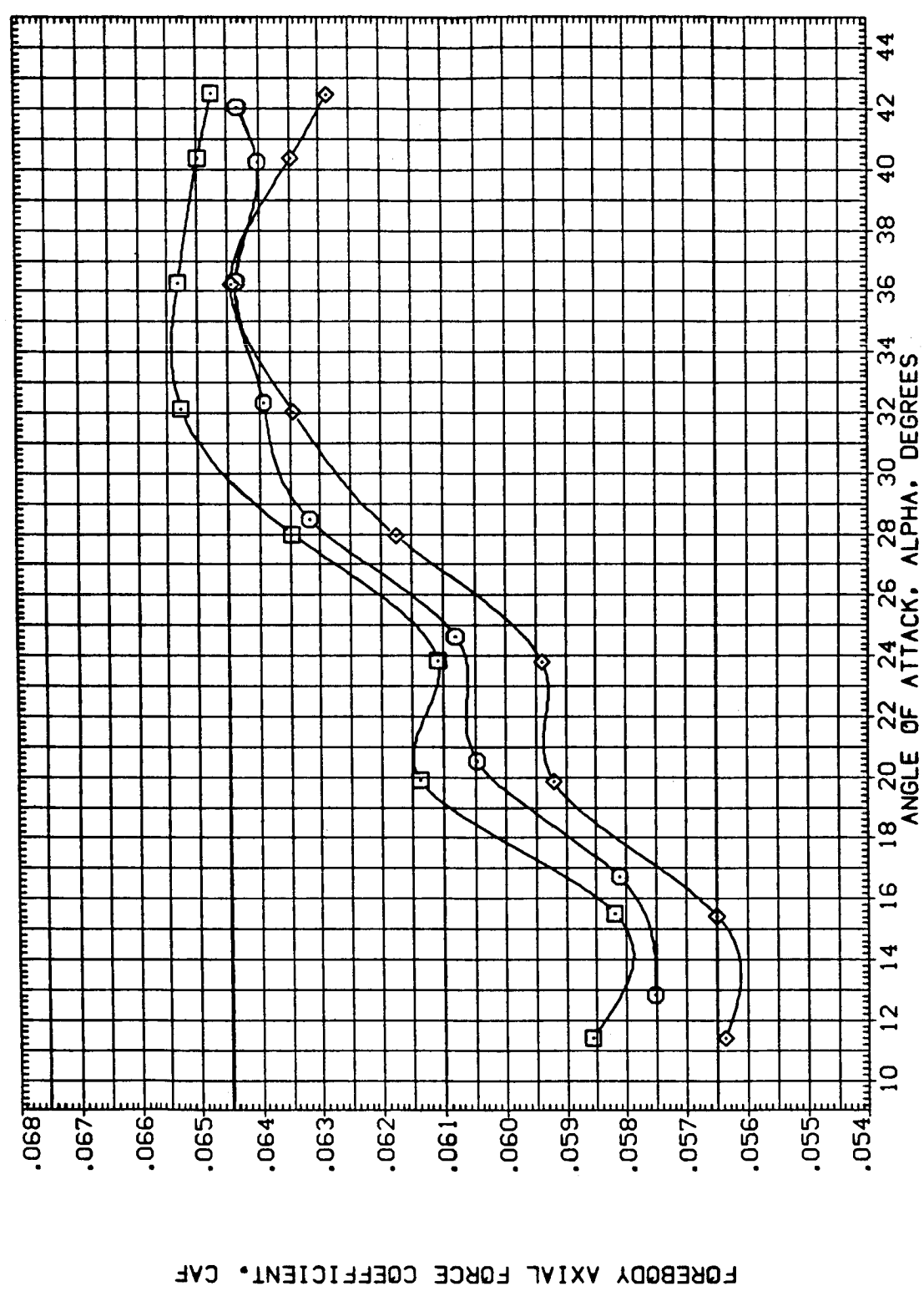


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(AJMACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0008)	AVES 3.5-190 0A98 (011-H7-M14)	5.000	-40.000	-11.700	55.000	SREF 2630.0000 SQ.FT.
(EE0012)	AVES 3.5-190 0A98 (011-H7-M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(EE0024)	AVES 3.5-190 0A98 (011-H7-M14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.X0
						ZMRP .0000 IN.Y0
						SCALE 375.0000 IN.Z0

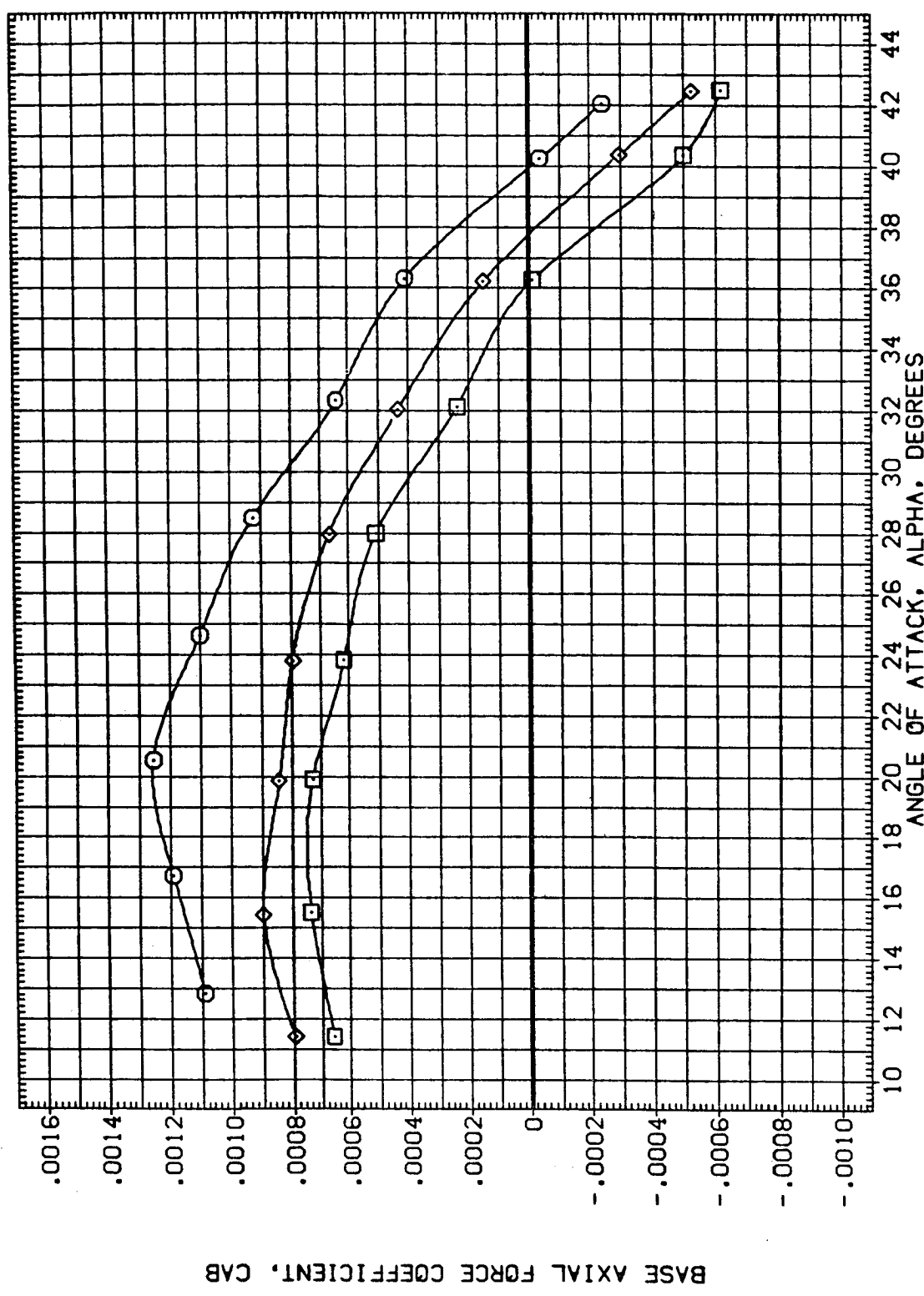


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(AJMACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0008)	AMES 3.5-190 0A98 (011-47-HI-4)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0012)	AMES 3.5-190 0A98 (011-47-HI-4-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(BE0024)	AMES 3.5-190 0A98 (011-47-HI-4-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6000 IN.
						XREF 1076.7000 IN. X0
						YREF .0000 IN. Y0
						ZREF .0000 IN. Z0
						SCALE .0150

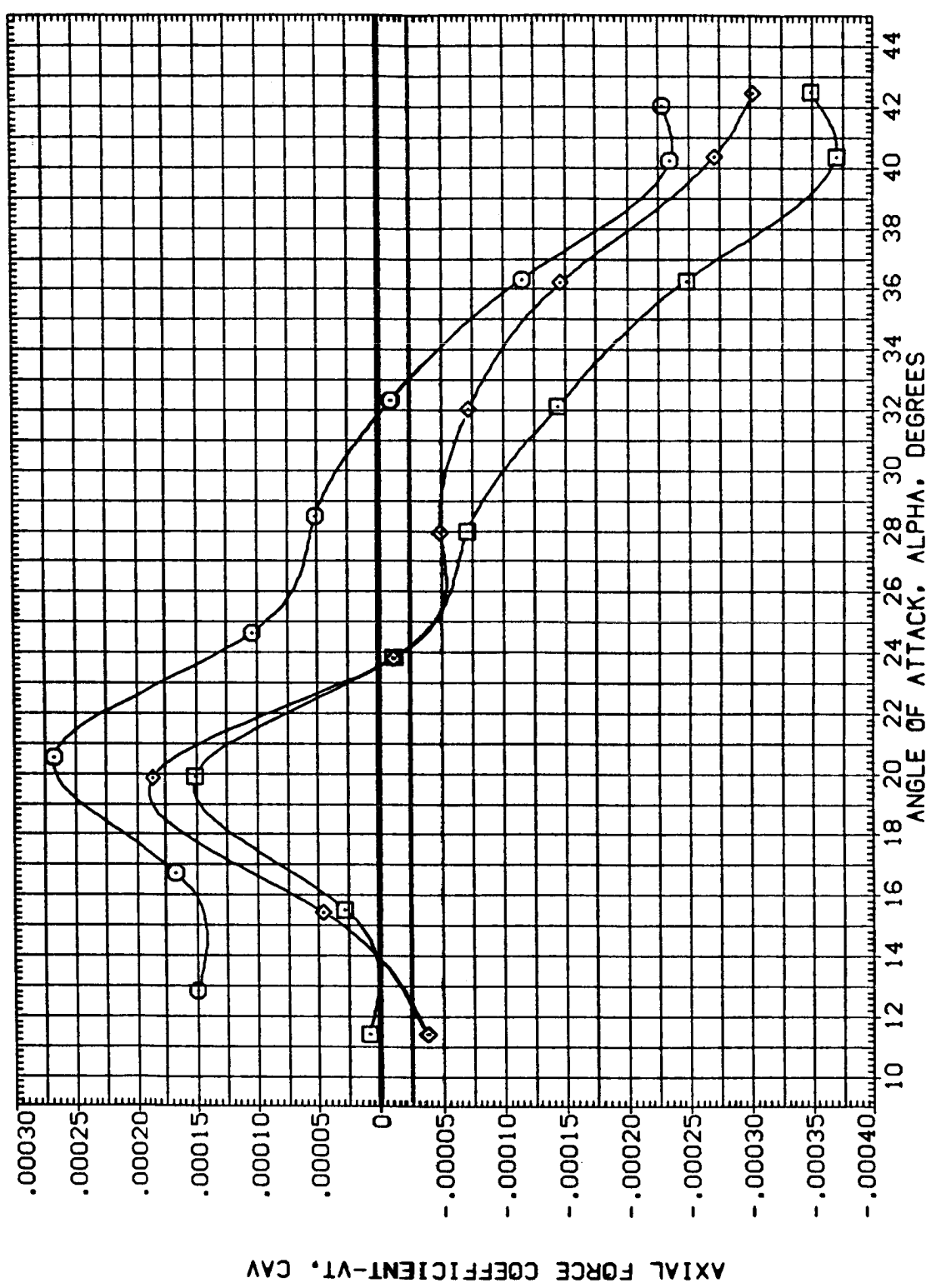


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BEO008)	AMES 3.5-190 OA98 (011-17-M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEO012)	AMES 3.5-190 OA98 (011-17-M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(BEO024)	AMES 3.5-190 OA98 (011-17-M14-N24+JUNNY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						YMRP 1076.7000 IN.
						ZMRP .0000 IN.
						SCALE 375.0000 IN.

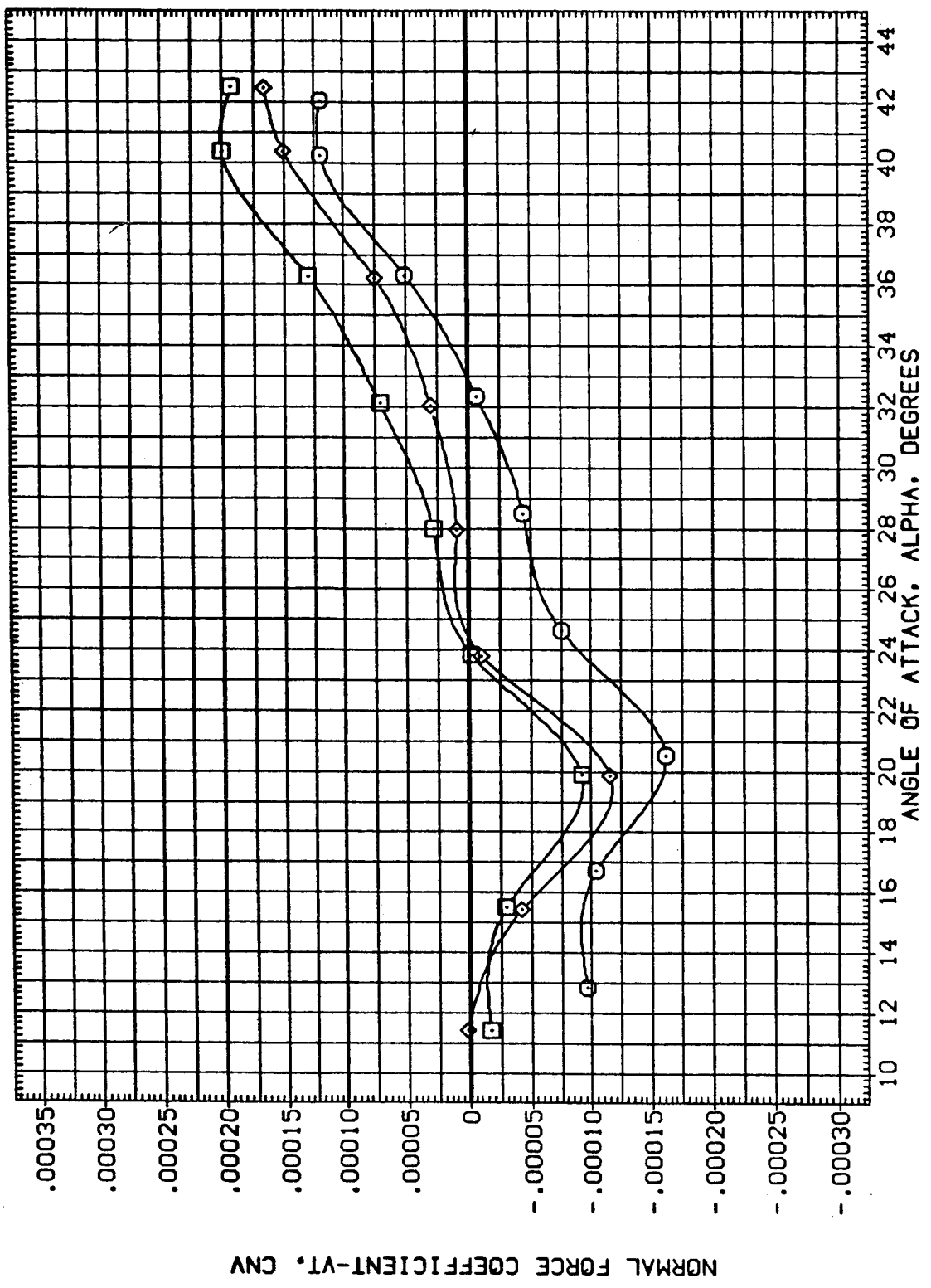


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CAJ MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BE0008)	AMES 3.5-190 0A98 (011-17-M14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0012)	AMES 3.5-190 0A98 (011-17-M14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(BE0024)	AMES 3.5-190 0A98 (011-17-M14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

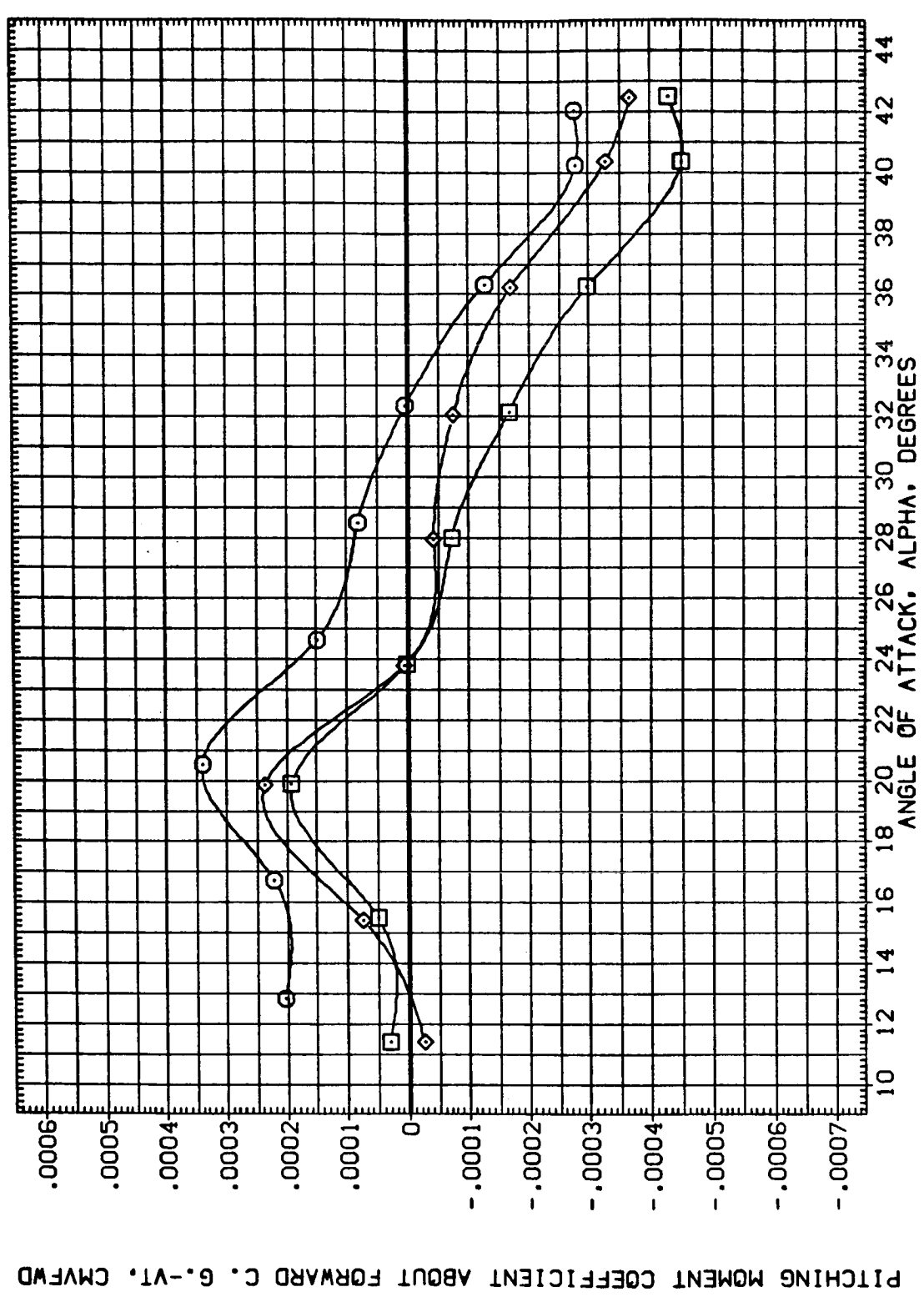


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION			
(BE0008)	AVES 3.5-190 OA98 (011-M7-M14)	5.000	-40.000	-11.700	55.000	SREF	2690.0000	50. FT.	
(BE0012)	AVES 3.5-190 OA98 (011-M7-M14-N24)	5.000	-40.000	-11.700	55.000	LREF	474.8000	IN.	
(BE0024)	AVES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF	936.6800	IN.	X9
						XMRP	1076.7000	IN.	Y0
						YMRP	375.0000	IN.	Z0
						SCALE	.0150		

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT, CMVAFT

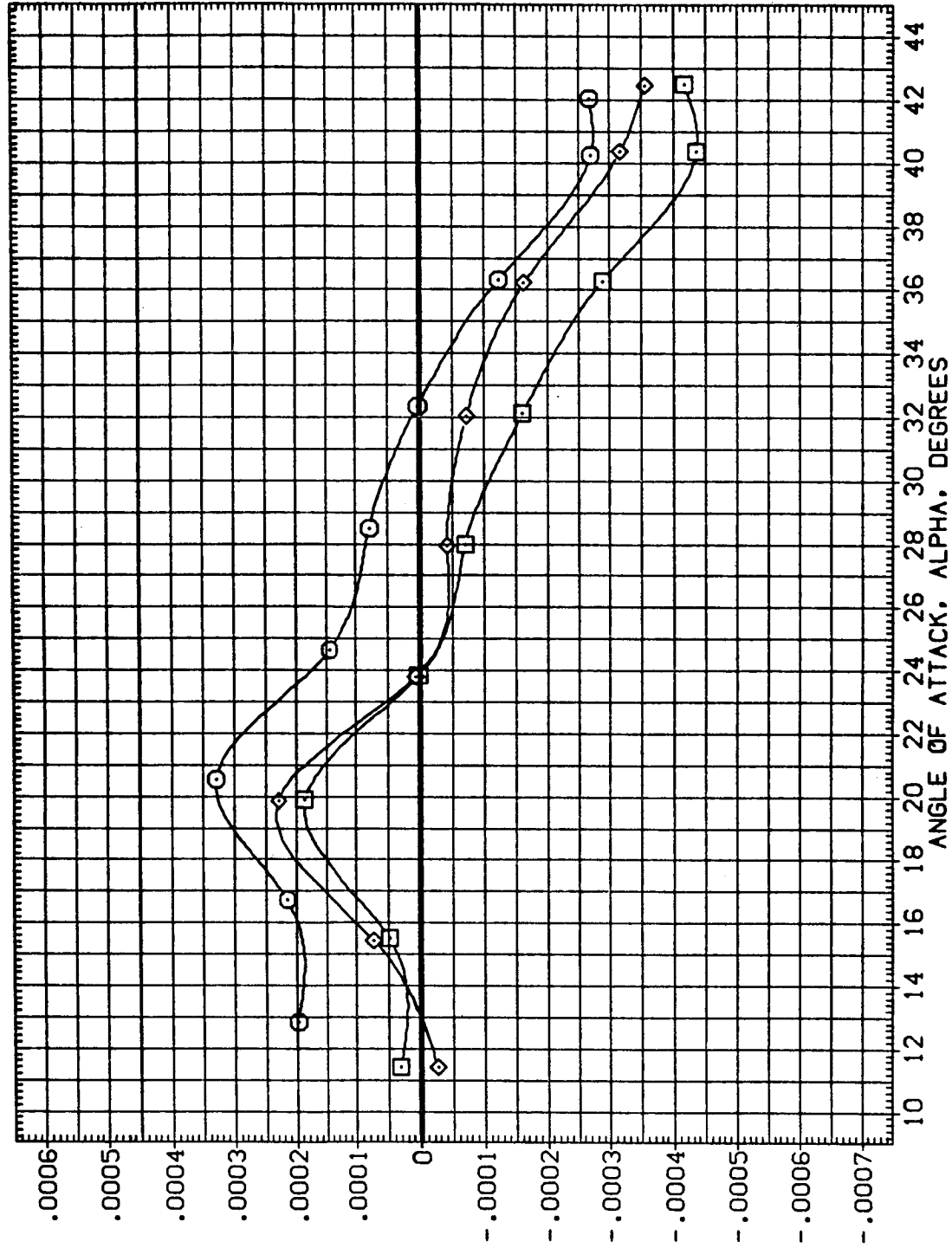



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27

DATA SET SYMBOL (Y00012) (Y00024)  CONFIGURATION DESCRIPTION AMES 3.5-150 BAY8 (011-47+114-N24) AMES 3.5-150 BAY8 (011-47+114-N24+JUNNY STING)

BETA 5.000 5.000 5.000 ELEVON -40.000 -40.000 -40.000 BOFLAP -11.700 -11.700 -11.700 SPOBRK 55.000 55.000 55.000

REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8000 IN. BREF 936.6800 IN. XMRP 1076.7000 IN. YMRP 375.0000 IN. ZMRP 375.0000 IN. SCALE .0150

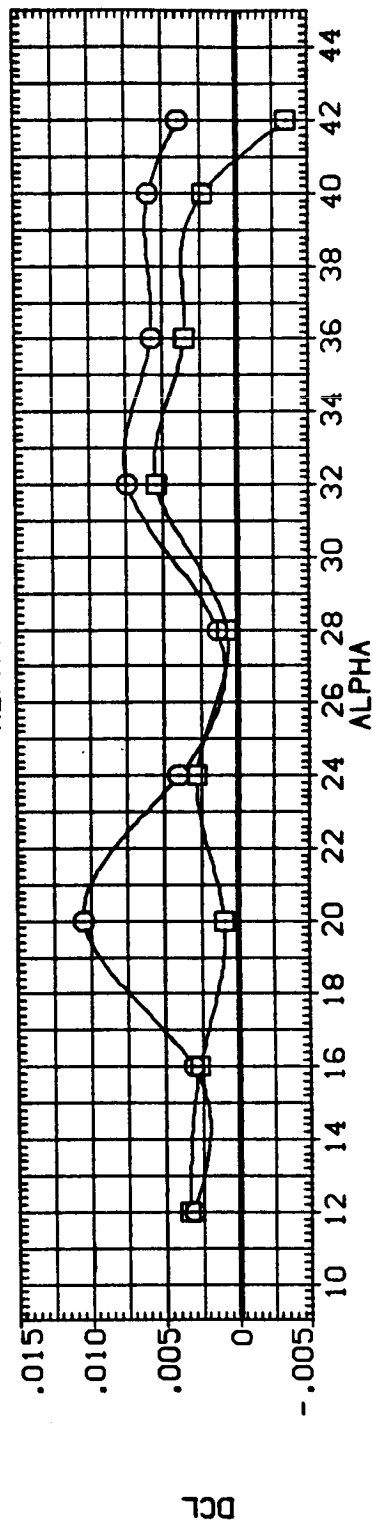
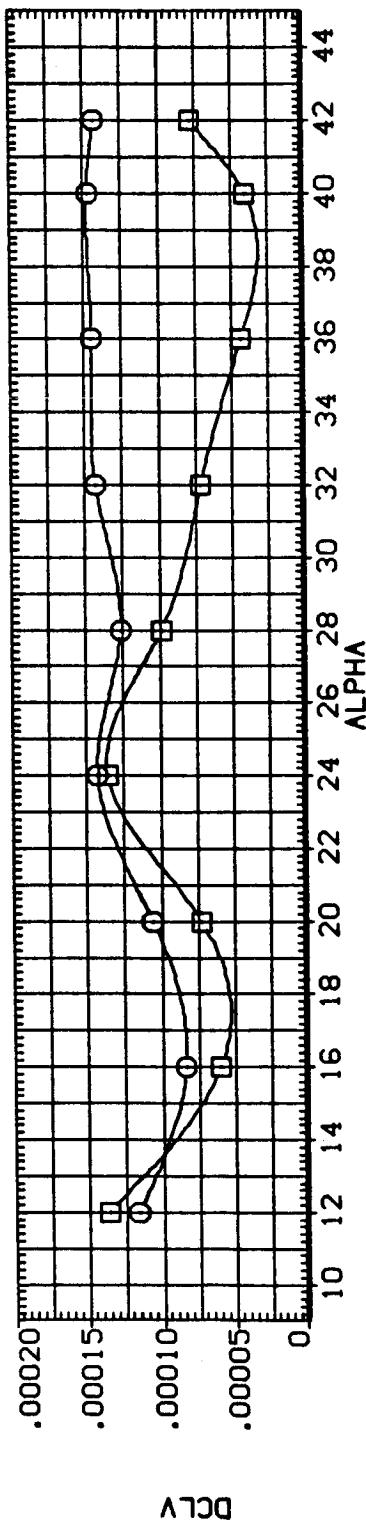
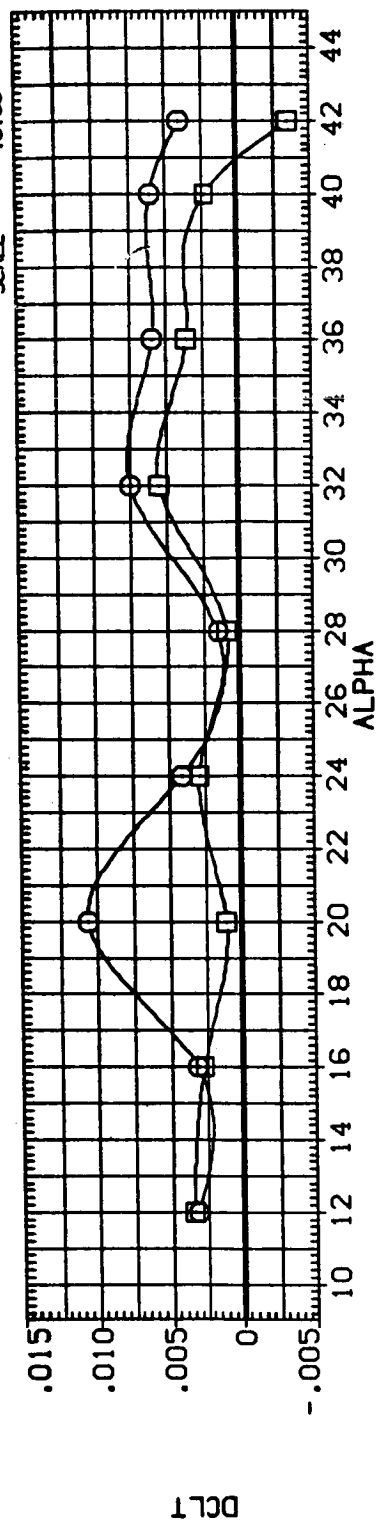


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.30

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION	
(ZE0012)	□	AMES 3.5-190 0A98 (011-H7-H14-N24)		5.000	-40.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(ZE0024)	□	AMES 3.5-190 0A98 (011-H7-H14-N24-DUMMY STING)		5.000	-40.000	-11.700	55.000	LREF	474.8000 IN.
								BREF	936.6800 IN.
								XMRP	1076.7000 IN.X0
								YMRP	.0000 IN.Y0
								ZMRP	375.0000 IN.Z0
								SCALE	.0150

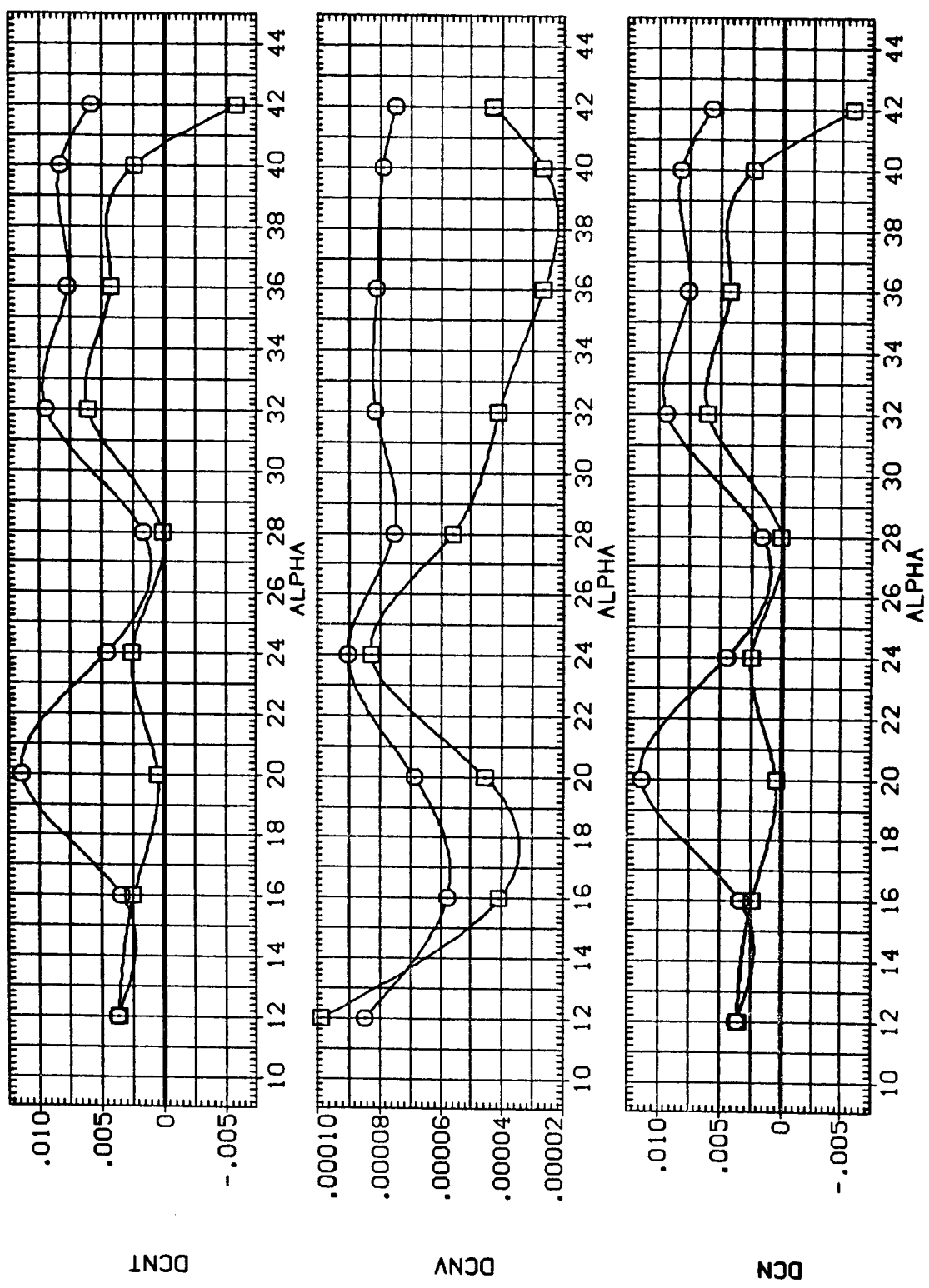


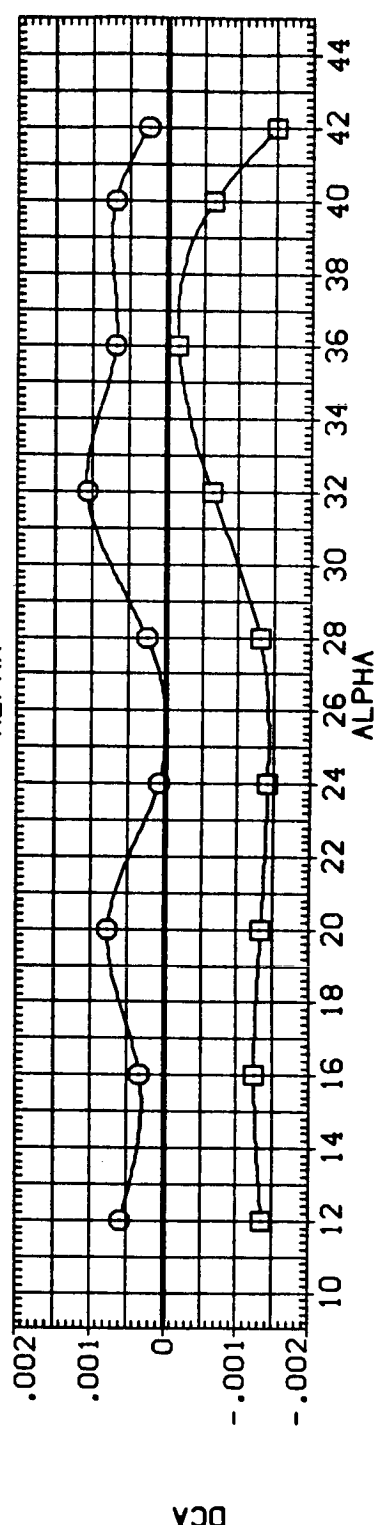
FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A) MACH = 10.30





REFERENCE INFORMATION	
SREF	2630.0000 SQ.FT.
LREF	474.8000 IN.
BREF	936.6800 IN.
XHPF	1076.7000 IN.X0
YHPF	.0000 IN.Y0
ZHPF	375.0000 IN.Z0
SCALE	.0150



**CAMACH = 10.30**



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SP06BK	REFERENCE INFORMATION
(1E0012)	AMES 3.5-190 0A98 (011-M7+M14-N24)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SO.FT.
(1E0024)	AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XPRP 1076.7000 IN.XB
						YPRP .0000 IN.YB
						ZPRP 375.0000 IN.ZB
						SCALE .0150

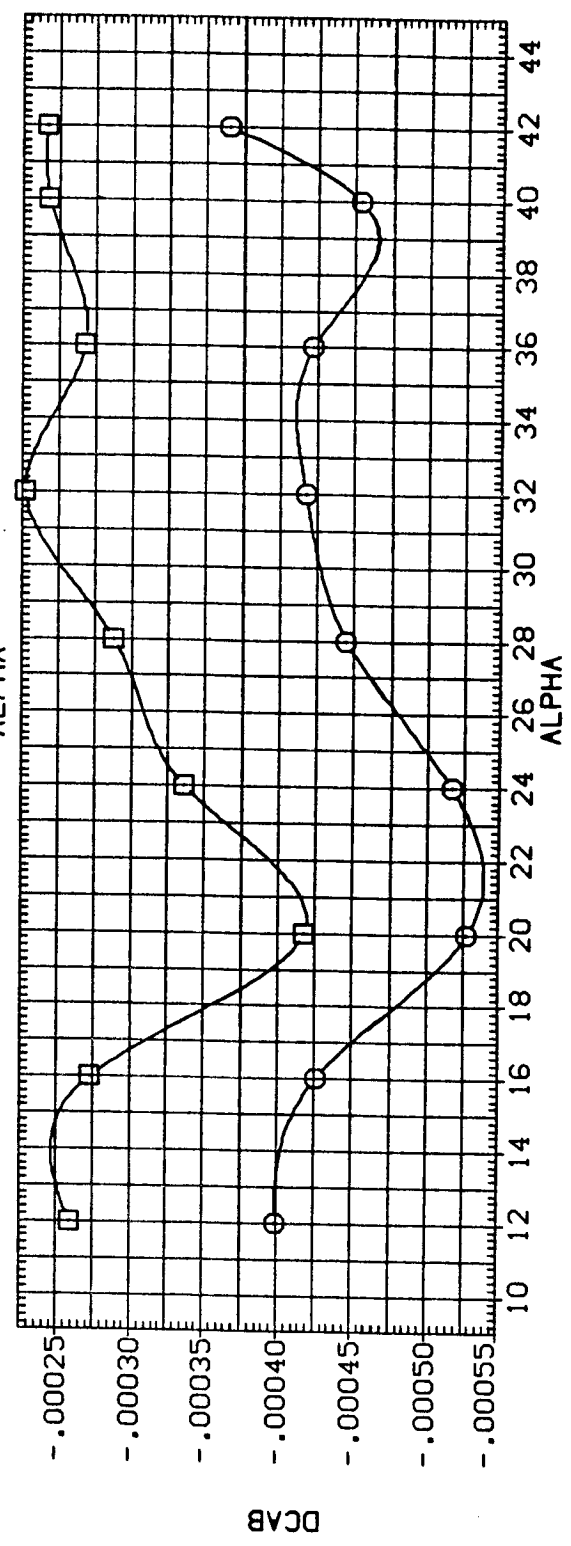
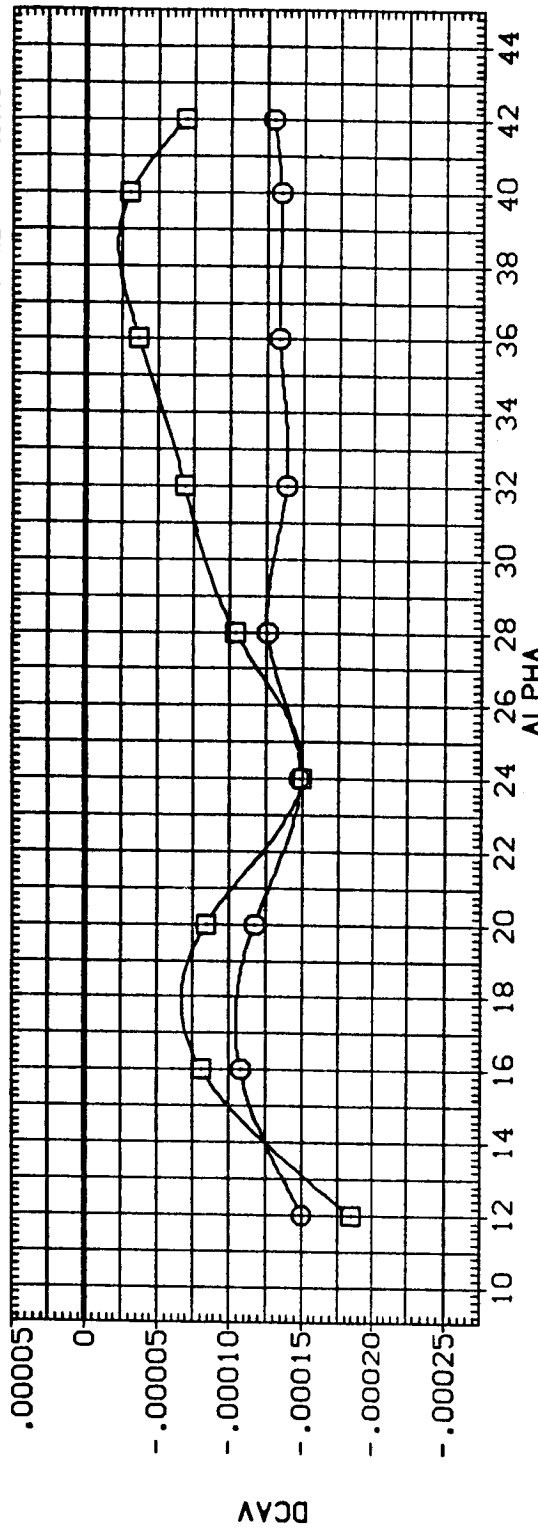




FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
(YED012)  AMES 3.5-190 0A98 (011-M7+M14-N24)  
(YED024)  AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)

BETA ELEVON BOFLAP SPDRBK  
5.000 -40.000 -11.700 55.000  
5.000 -40.000 -11.700 55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

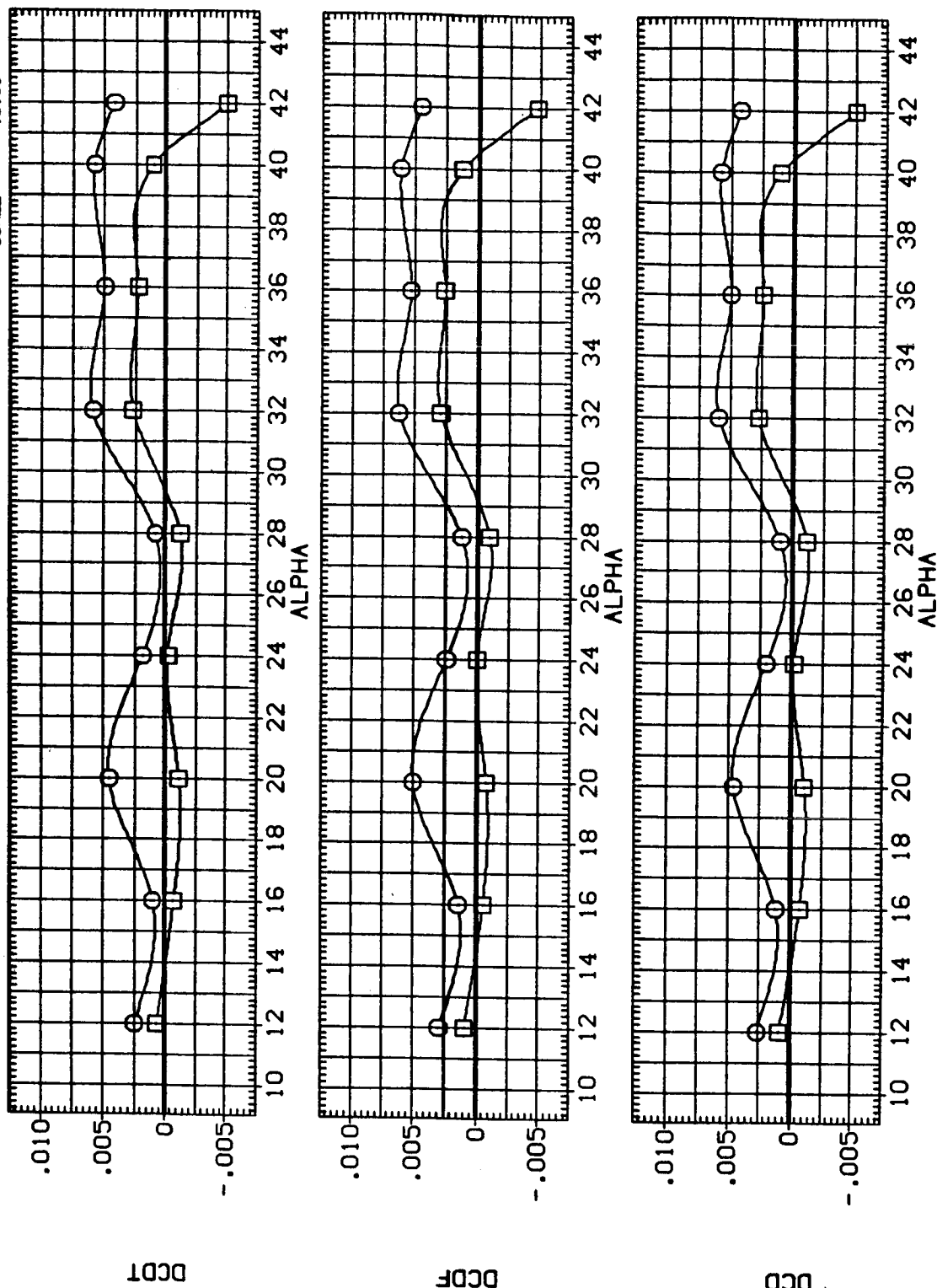



FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.30

DATA SET SYMBOL: (YEO012) (YEO024)  CONFIGURATION DESCRIPTION: AMES 3.5-190 0A98 (011-17-M14-N24) AMES 3.5-190 0A98 (011-17-M14-N24+DUMMY STING)

BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
				BREF 936.6800 IN.
				XMRP 1076.7000 IN.X0
				YMRP .0000 IN.Y0
				ZMRP .0000 IN.Z0
				SCALE .0150

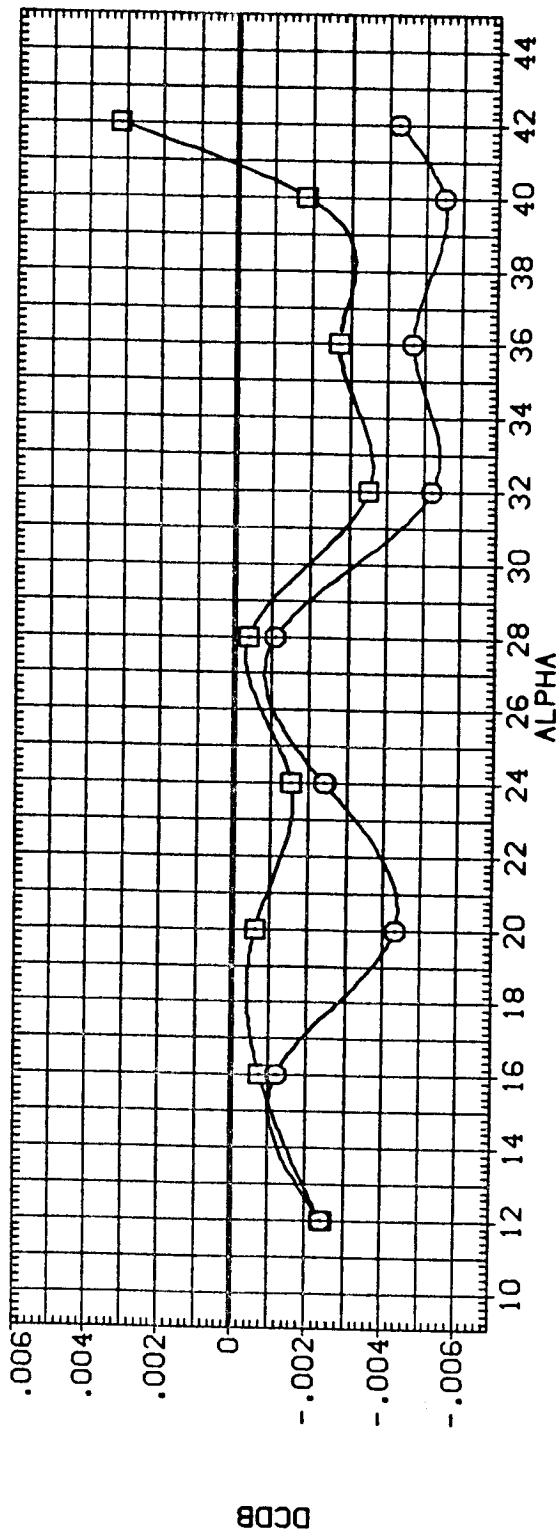
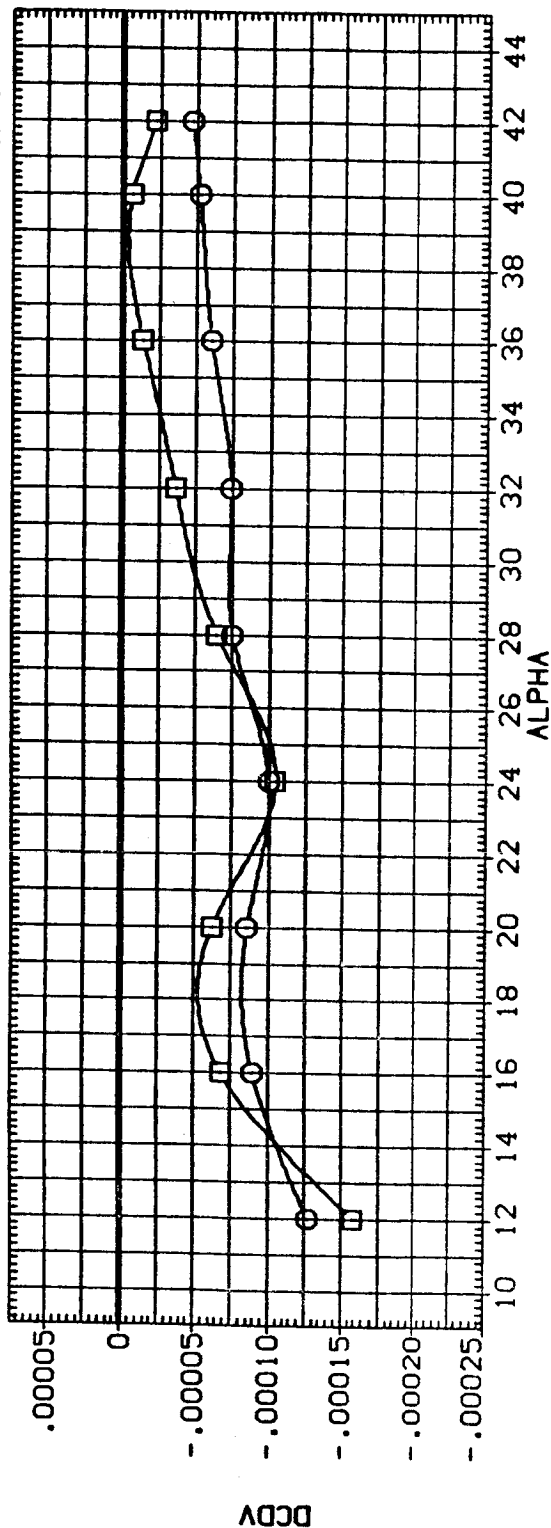


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.30

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(AEG008)	AMES 3.5-150 GA98 (011-47-4114)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AEG012)	AMES 3.5-150 GA98 (011-47-4114-124)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(AEG024)	AMES 3.5-150 GA98 (011-47-4114-124+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X9
						YMRP .0000 IN.Y9
						ZMRP 375.0000 IN.Z9
						SCALE .0150

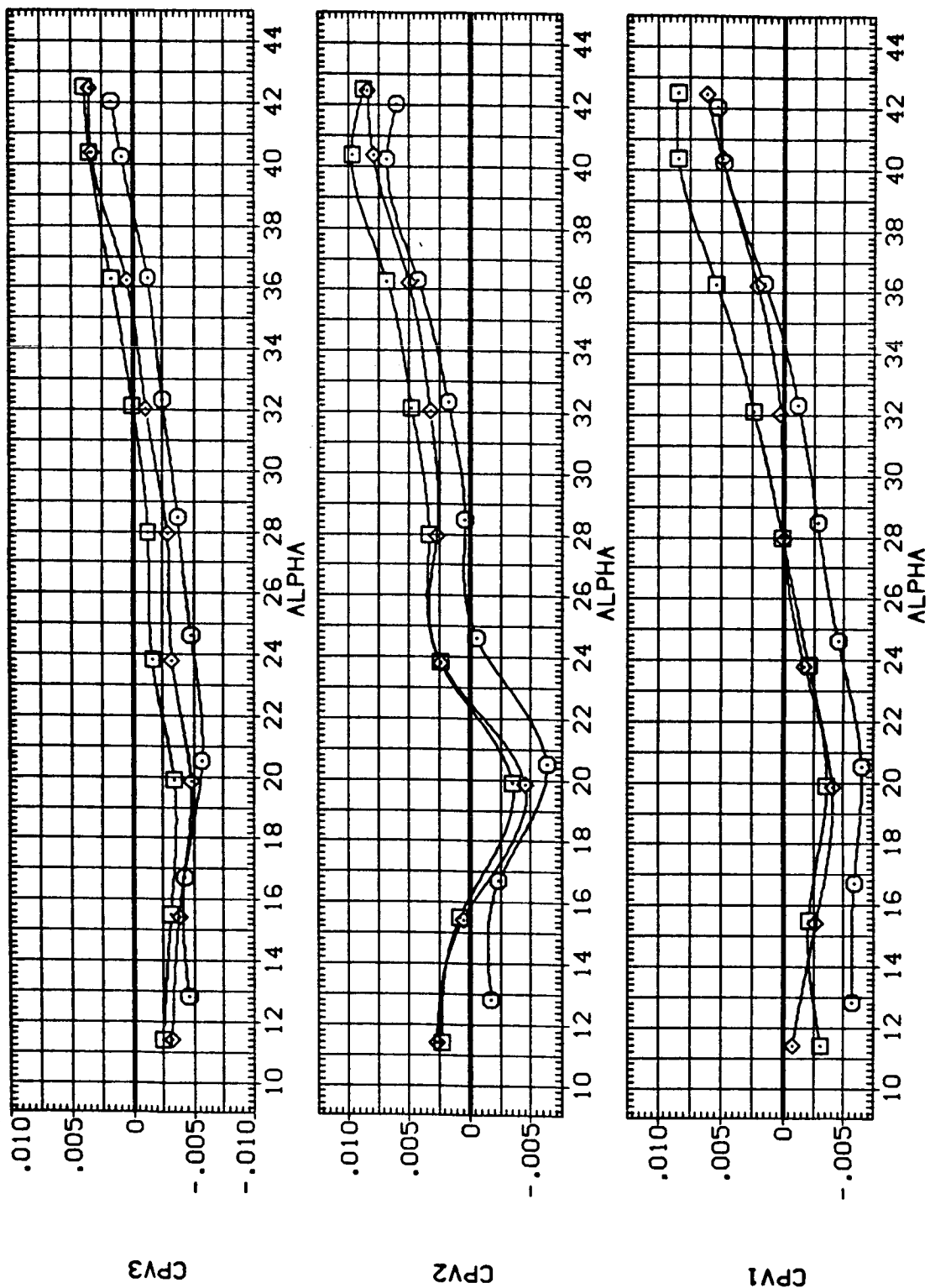


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AE0008)	AMES 3.5-190 GA98 (011-17-H14)	5.000	-40.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AE0012)	AMES 3.5-190 GA98 (011-17-H14-N24)	5.000	-40.000	-11.700	55.000	LREF 474.8000 IN.
(AE0024)	AMES 3.5-190 GA98 (011-17-H14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

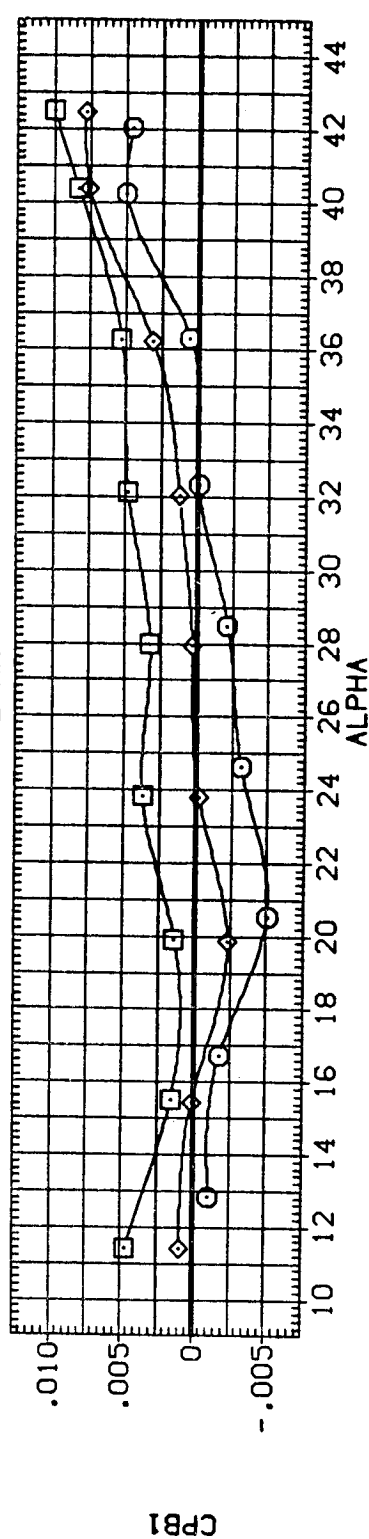
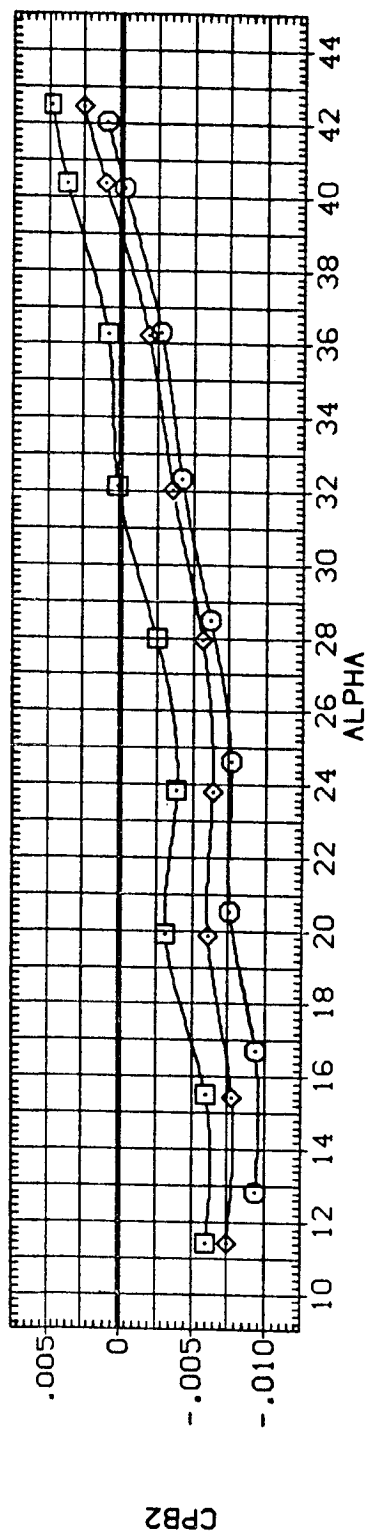
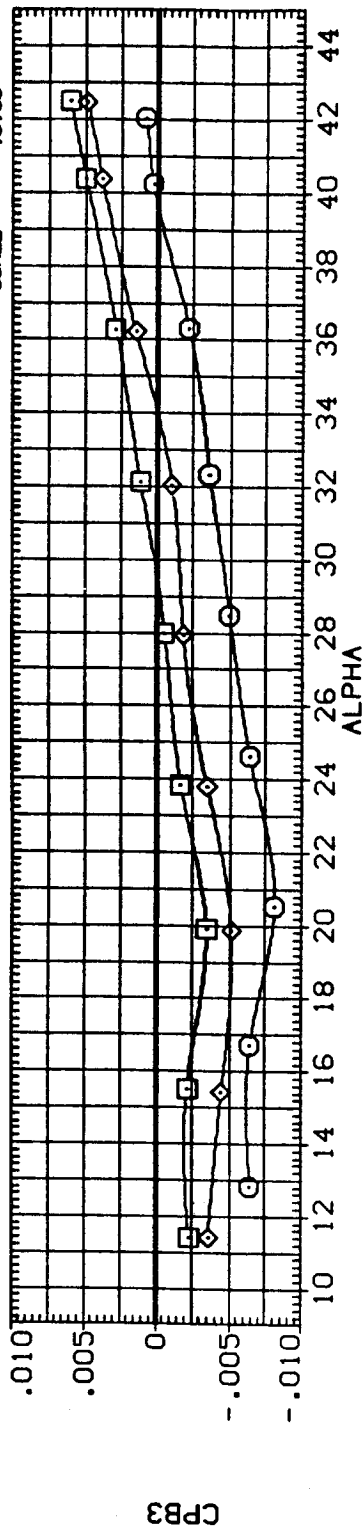


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0007)	AVES 3.5-190 0A98 (011-M7+M14)	5.000	.000	-11.700	53.000	SREF 2690.0000 SQ.FT.
(CE0023)	AVES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XREF 1076.7000 IN.X0
						YREF .0000 IN.Y0
						ZREF 375.0000 IN.Z0
						SCALE .0150

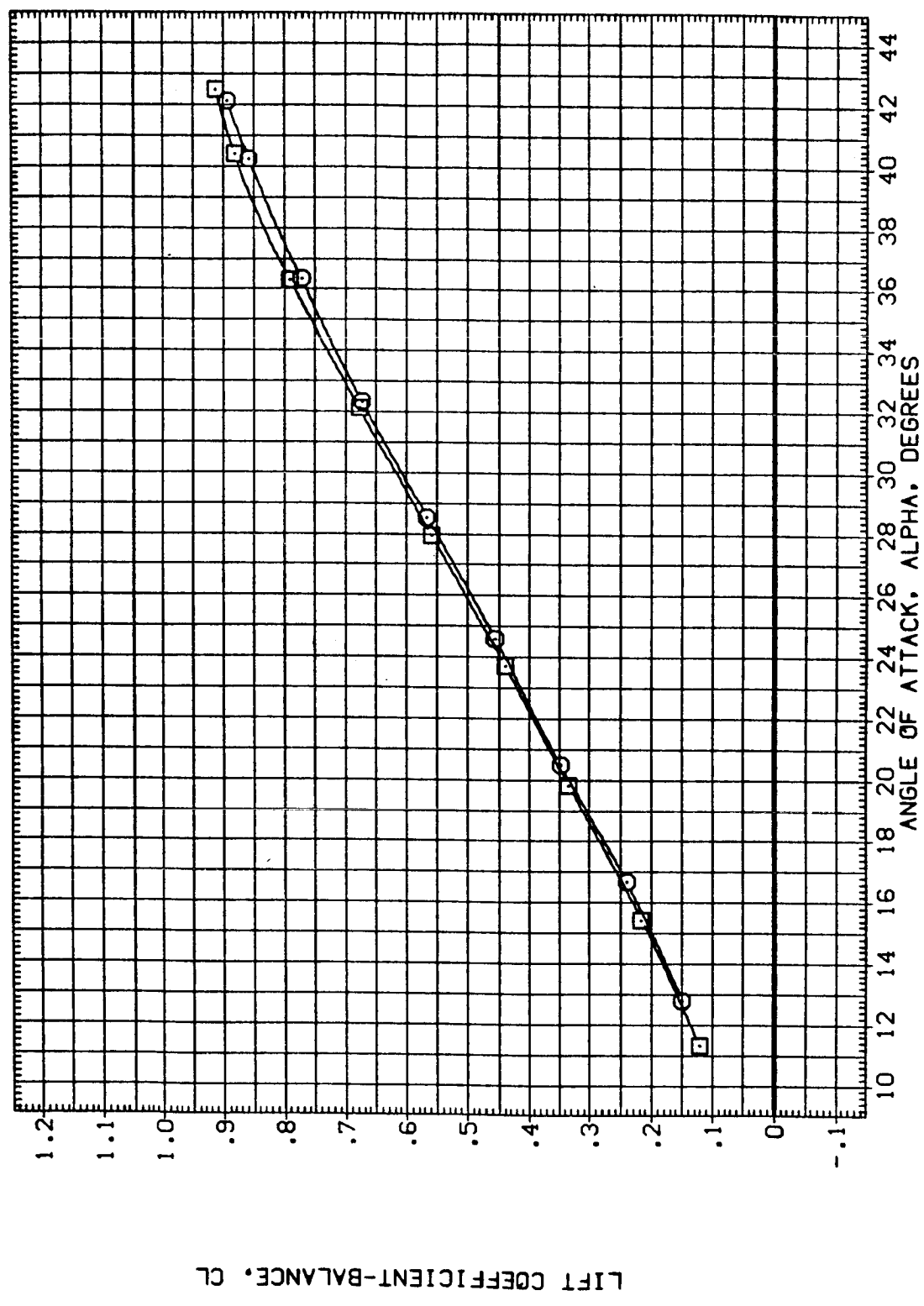


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DRAW COEFFICIENT-BALANCE, CD

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BD FLAP	SPD BRK	REFERENCE INFORMATION
(CE0007)	AMES 3.5-190 D198 (011-M7+H14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0023)	AMES 3.5-190 D198 (011-M7+H14-N24+DUM+Y STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XPRP 1076.7000 IN.X0
						YPRP .0000 IN.Y0
						ZPRP .0000 IN.Z0
						SCALE .0150

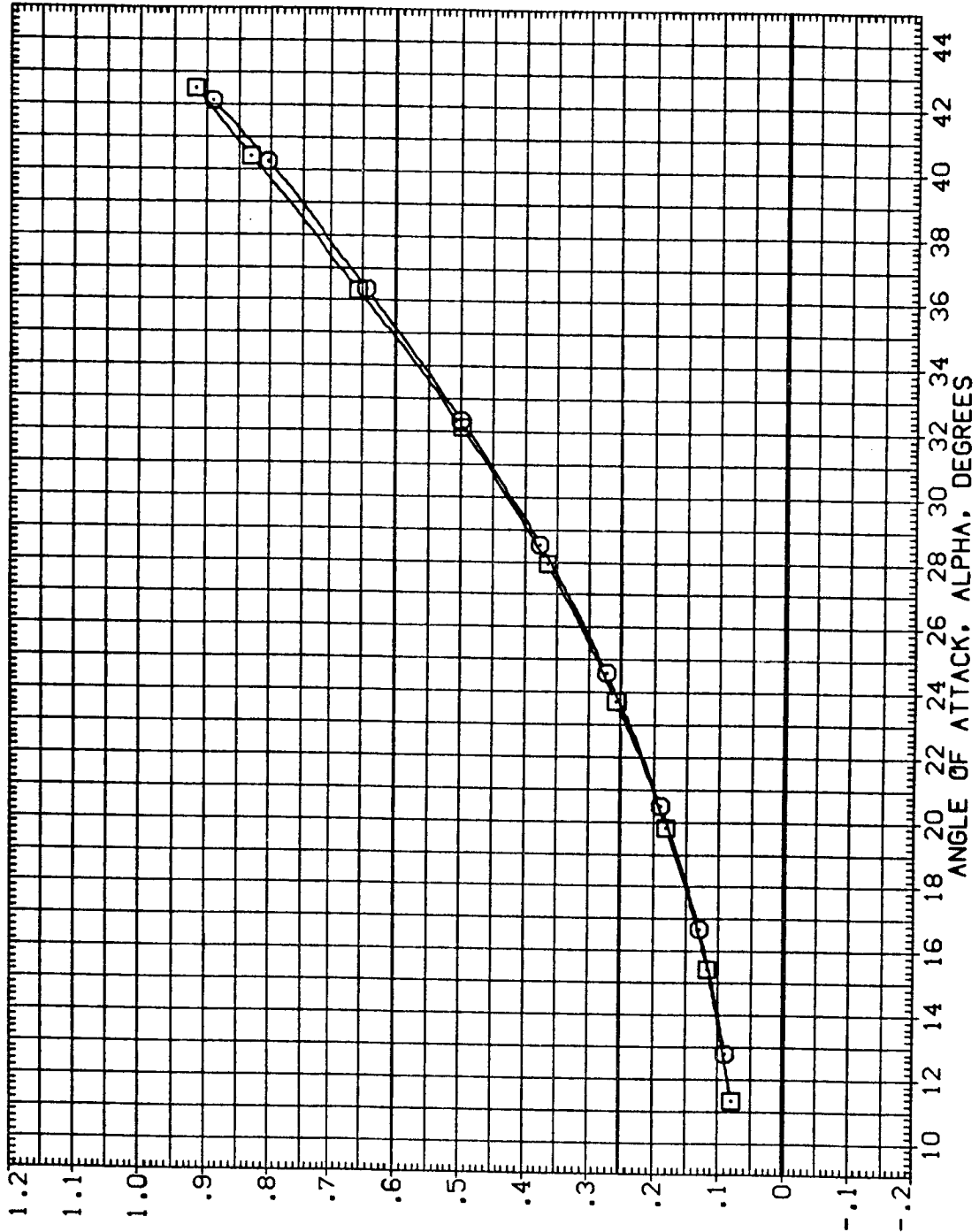


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27

AXIAL FORCE COEFFICIENT-BALANCE, CA

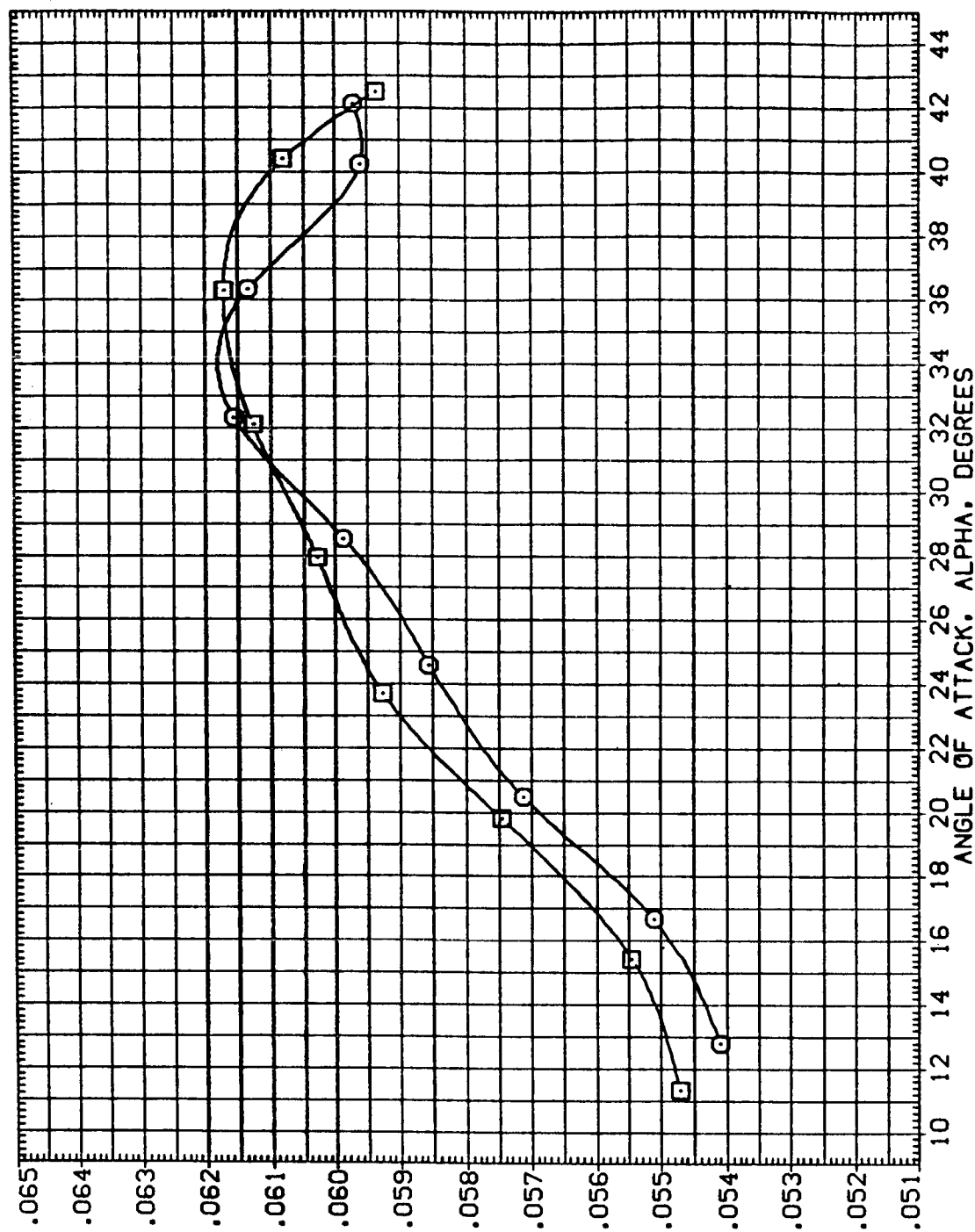


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

**(A)MACH = 10.27**



DATA SET SYMBOL (CE0007) **B** (CE0023)

CONFIGURATION DESCRIPTION  
 ARES 3.5-190 0A98 (011-17+M14)  
 ARES 3.5-190 0A98 (011-17+M14-N24+DUMMY STING)

BETA 5.000  
 5.000

ELEVON .000  
 .000

BOFLAP -11.700  
 -11.700

SPOBRK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-BALANCE, CLMFWO

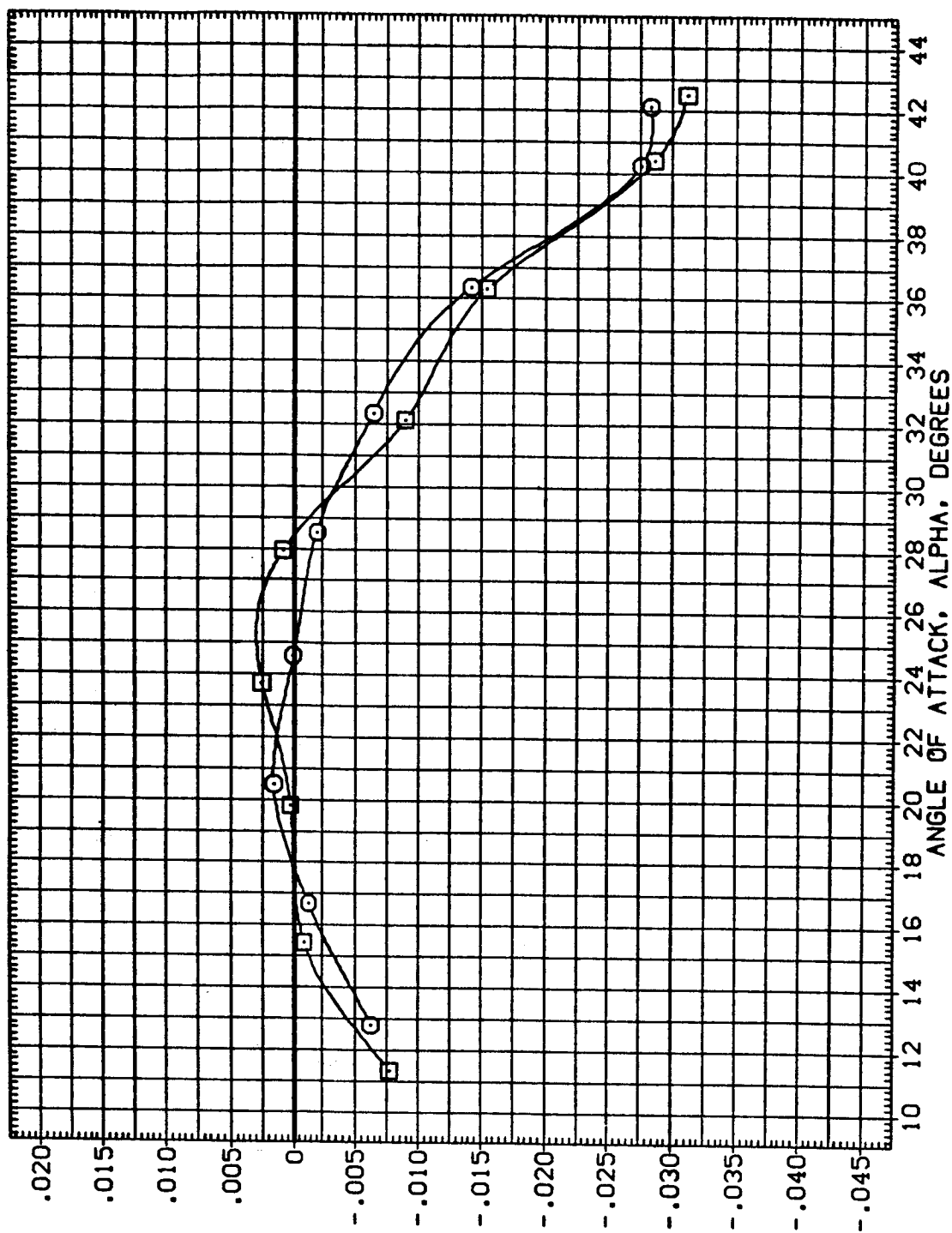


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

REFERENCE INFORMATION	
	50.FT. IN.
SREF	2690.0000
LREF	474.8000
BREF	936.6800
XMRP	1076.7000
YMRP	.0000
ZMRP	375.0000
SCALE	.0150

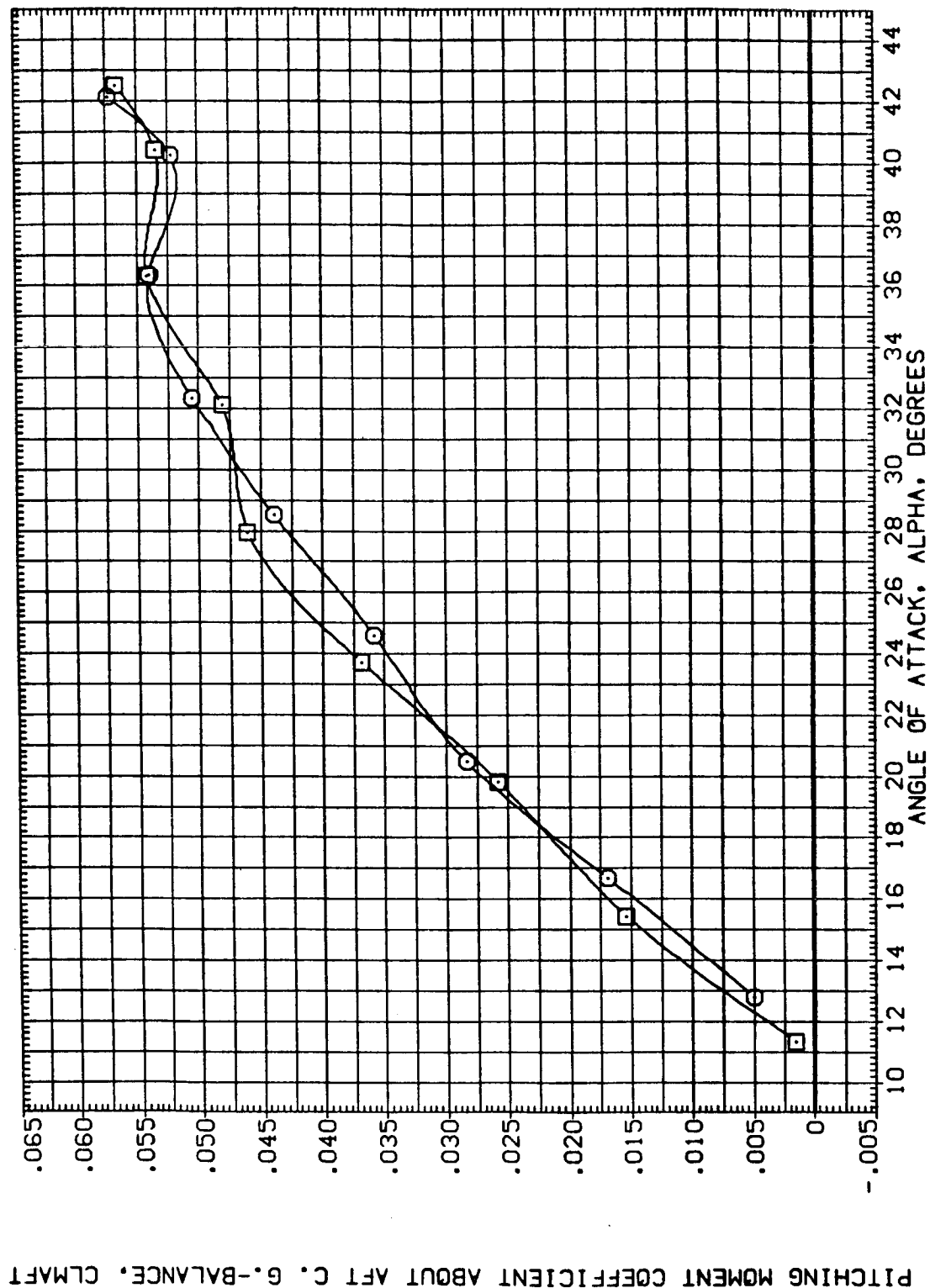


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

$$\{\Lambda\}MACH = 10.27$$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0007)	AMES 3.5-190 0A98 (011-H7+M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(CE0023)	AMES 3.5-190 0A98 (011-H7+M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

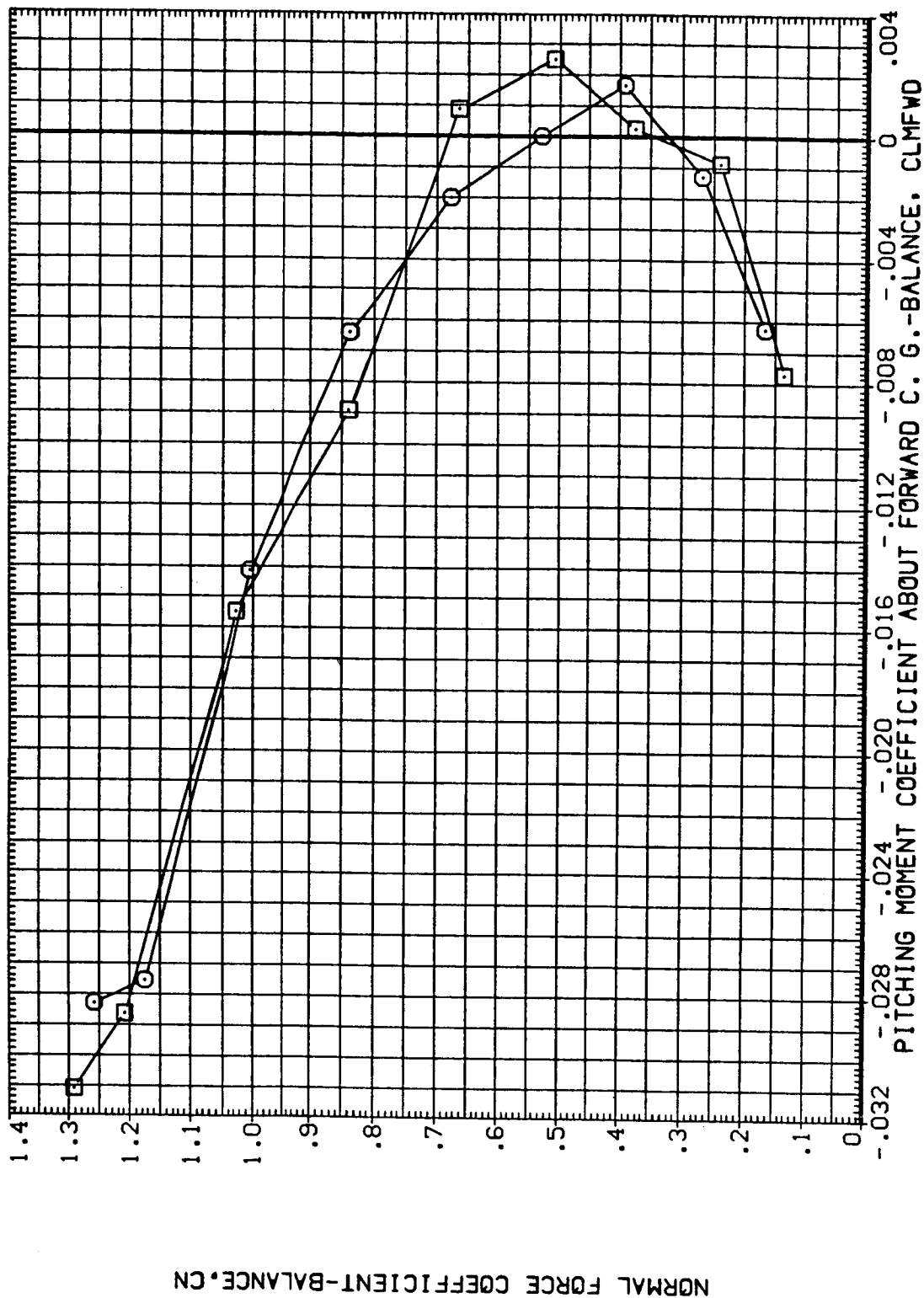


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVATION	BOFLAP	SPOBRK	REFERENCE INFORMATION
(CE0007)	AVES 3.5-190 0A98 (011-M7-M14)	5.000	.000	-11.700	55.000	SREF 2630.0000 SQ.FT.
(CE0023)	AVES 3.5-190 0A98 (011-M7-M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

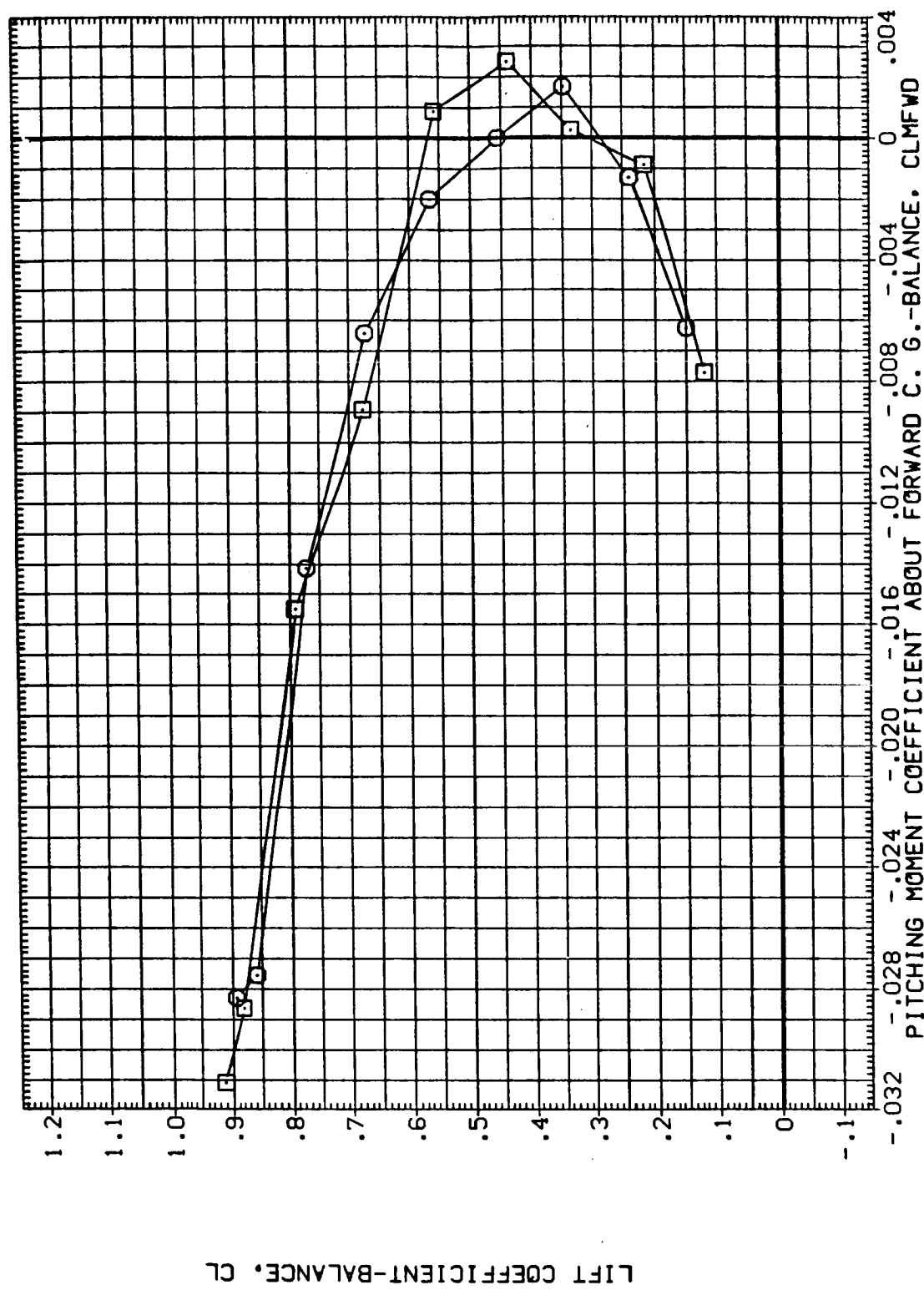


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRK	REFERENCE INFORMATION
(CE0007)	AMES 3.5-190 OA98 (011-M7+M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 50.FT.
(CE0023)	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

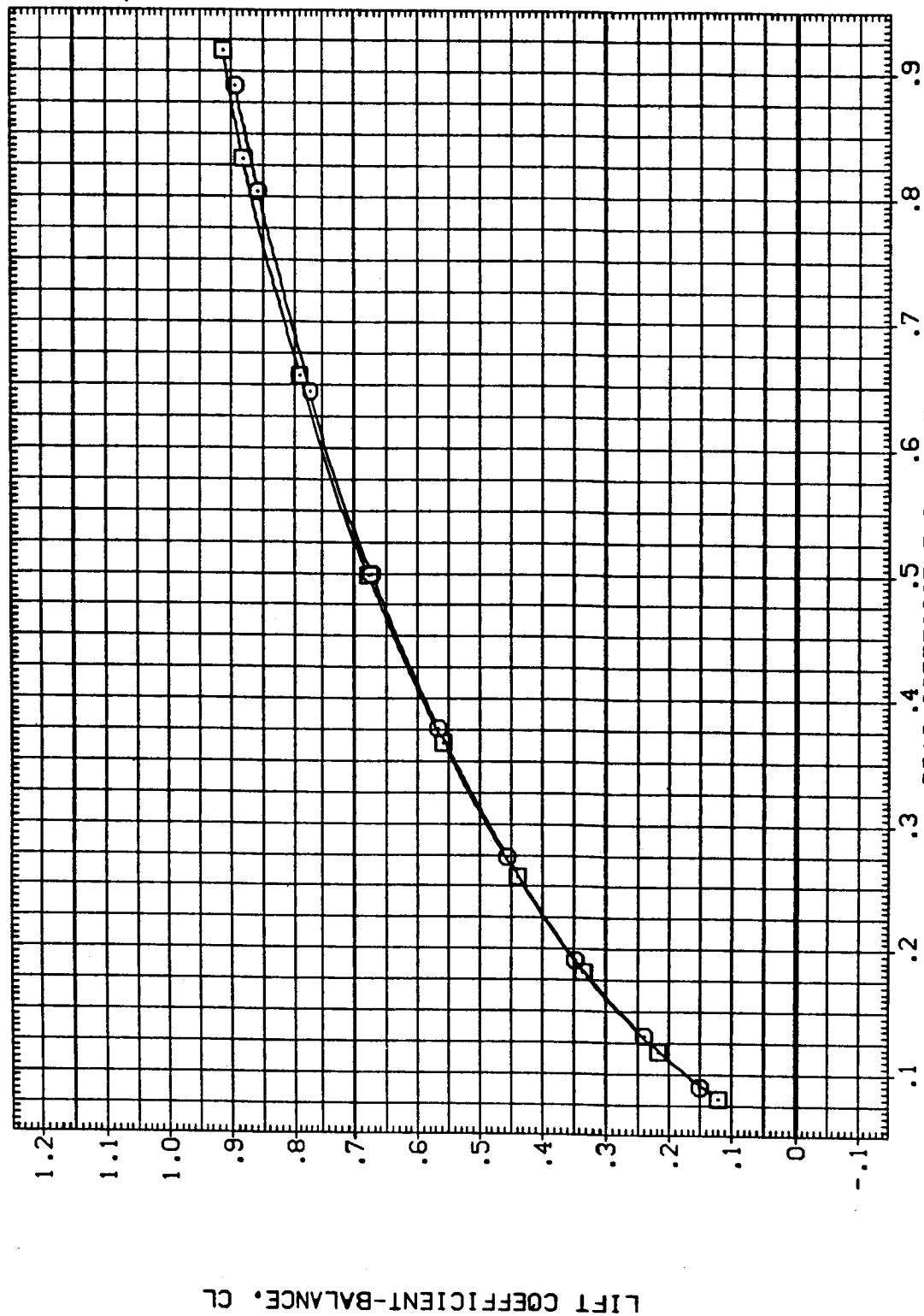


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

15

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(EE0007)	AVES 3.5-190 0A98 (011-17+114)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0023)	AVES 3.5-190 0A98 (011-17+114-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						YPRP 1076.7000 IN.X0
						ZPRP .0000 IN.Y0
						SCALE .0150 IN.Z0

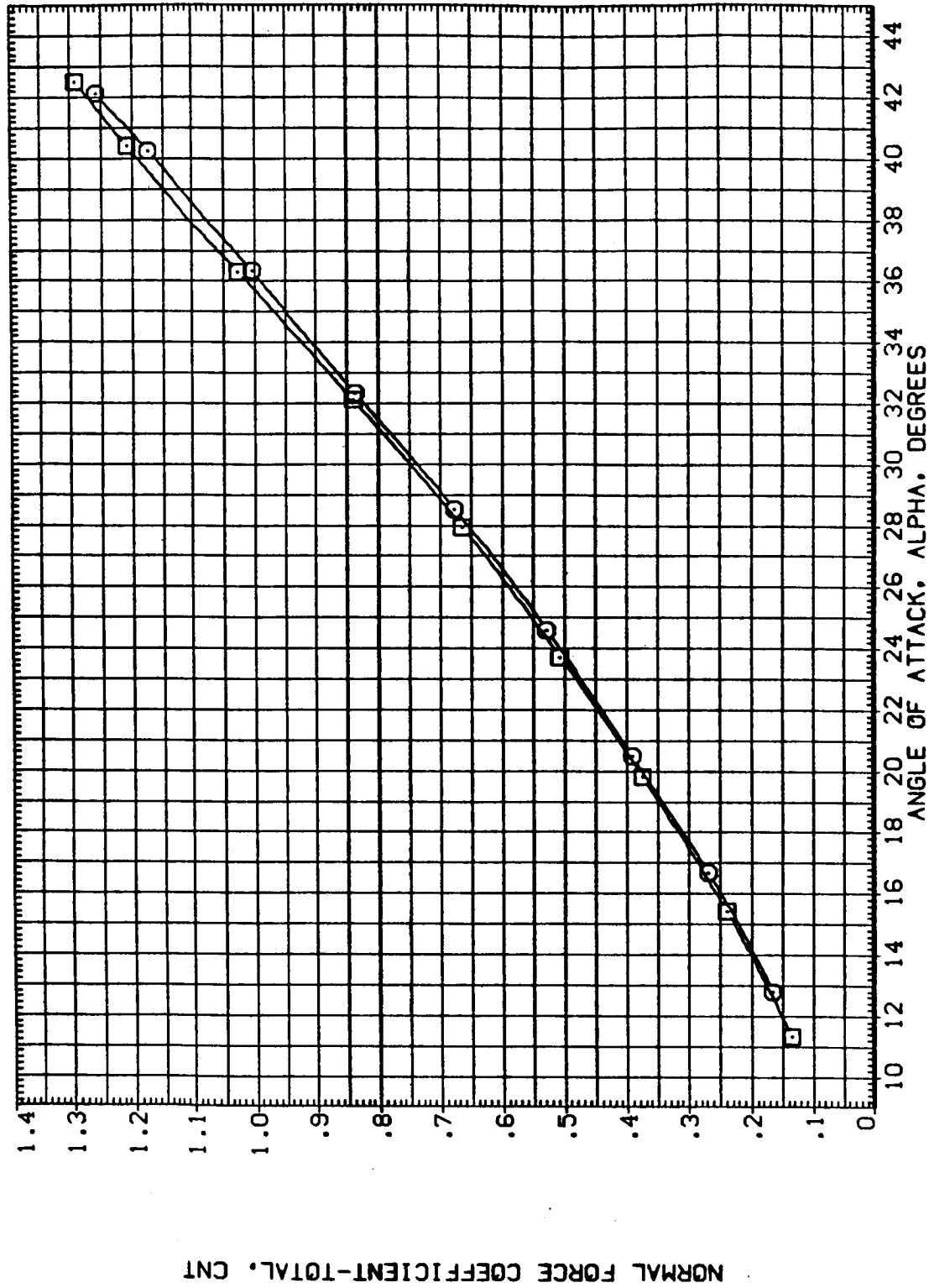


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(AJMACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(EE0007)	AMES 3.5-190 0A98 (011-17-M14)	5.000	.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(EE0023)	AMES 3.5-190 0A98 (011-17-M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF	474.8000 IN.
						BREF	936.6800 IN.
						XMRP	1076.7000 IN.X0
						YMRP	.0000 IN.Y0
						ZMRP	375.0000 IN.Z0
						SCALE	.0150

PITCHING MOMENT COEFFICIENT ABOUT FORWARD C. G.-TOTAL, CMTFWD

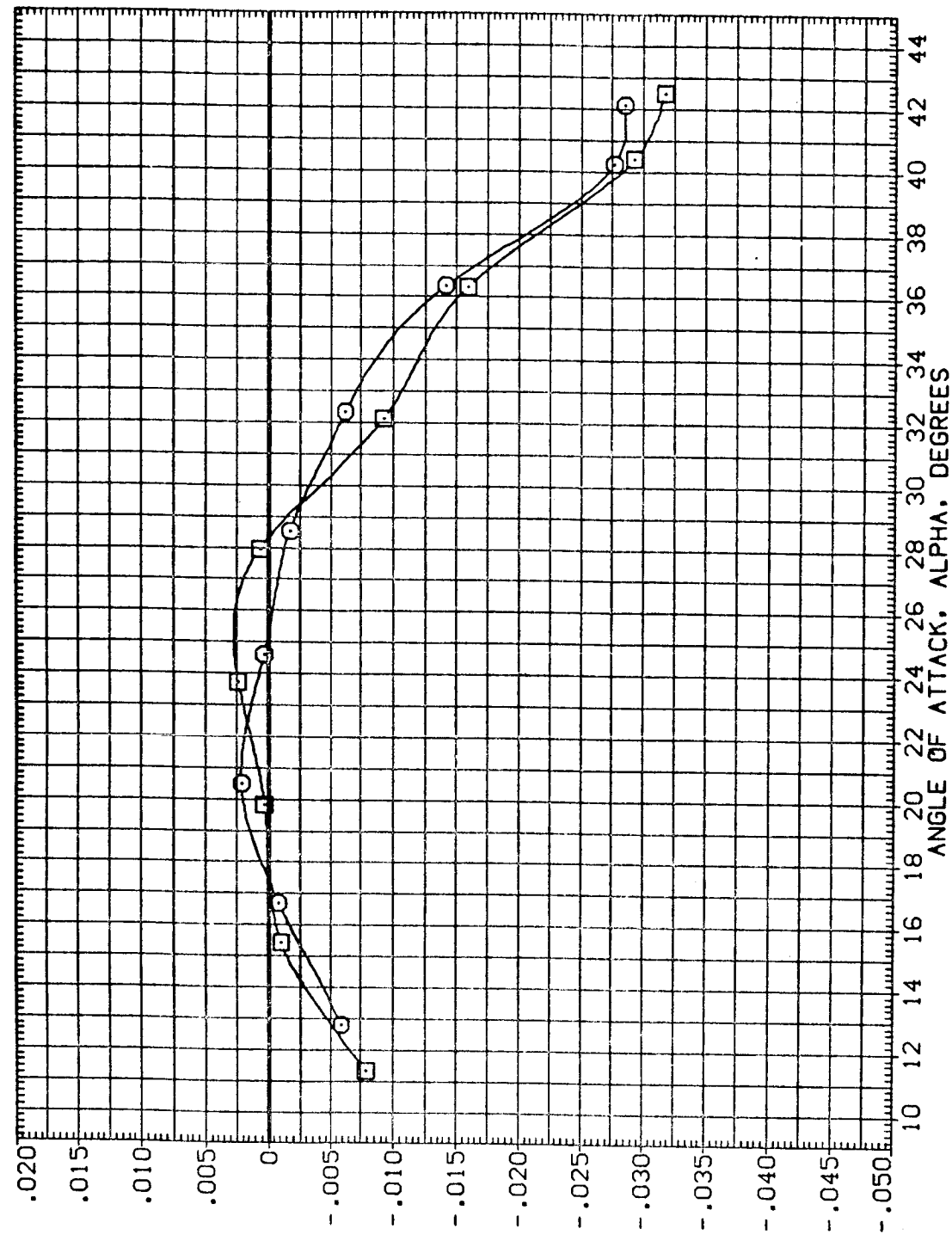


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL (EE0007) (EE0023)

CONFIGURATION DESCRIPTION  
 ARES 3.5-190 0A98 (011-M7-M14)  
 ARES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)

BETA 5.000  
 5.000

ELEVON .000  
 .000

BOFLAP -11.700  
 -11.700

SPDBRK 55.000  
 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

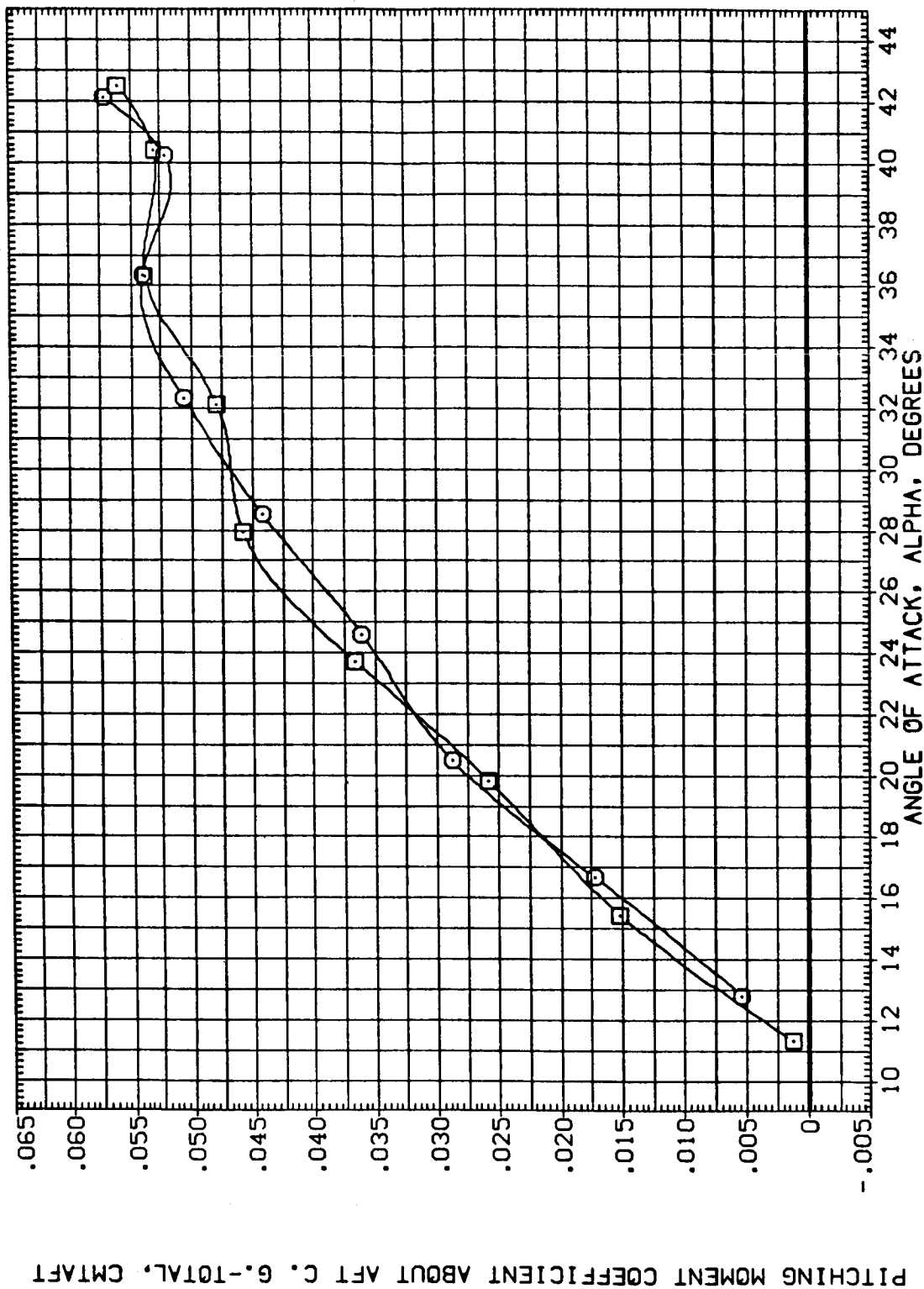


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOERK	REFERENCE INFORMATION
(EE0007)	ANES 3.5-190 0A98 (011-M7+M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0023)	ANES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

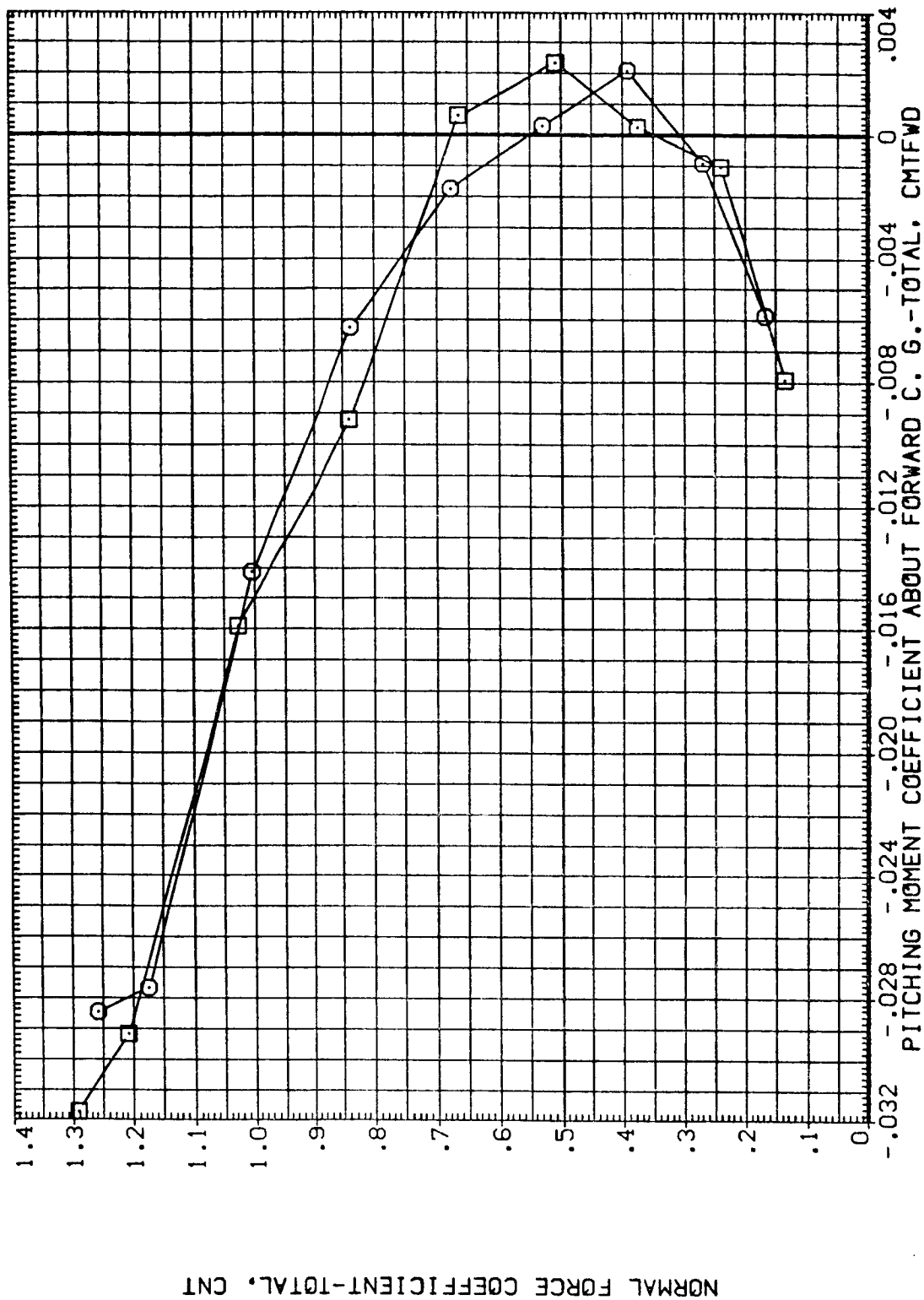


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL    CONFIGURATION DESCRIPTION  
 (EEQ007)    AVES 3.5-190 0A98 (011-H7+H14)  
 (EEQ023)    AVES 3.5-190 0A98 (011-H7+H14-A24+DUMMY STING)

BETA    5.000  
 ELEVON    .000  
 BOFLAP    -11.700  
 SPOBRK    55.000

REFERENCE INFORMATION  
 SREF    2690.0000    50.FT.  
 LREF    474.8000    IN.  
 BREF    936.5800    IN.  
 XMRP    1076.7000    IN.X0  
 YMRP    .0000    IN.Y0  
 ZMRP    375.0000    IN.Z0  
 SCALE    .0150

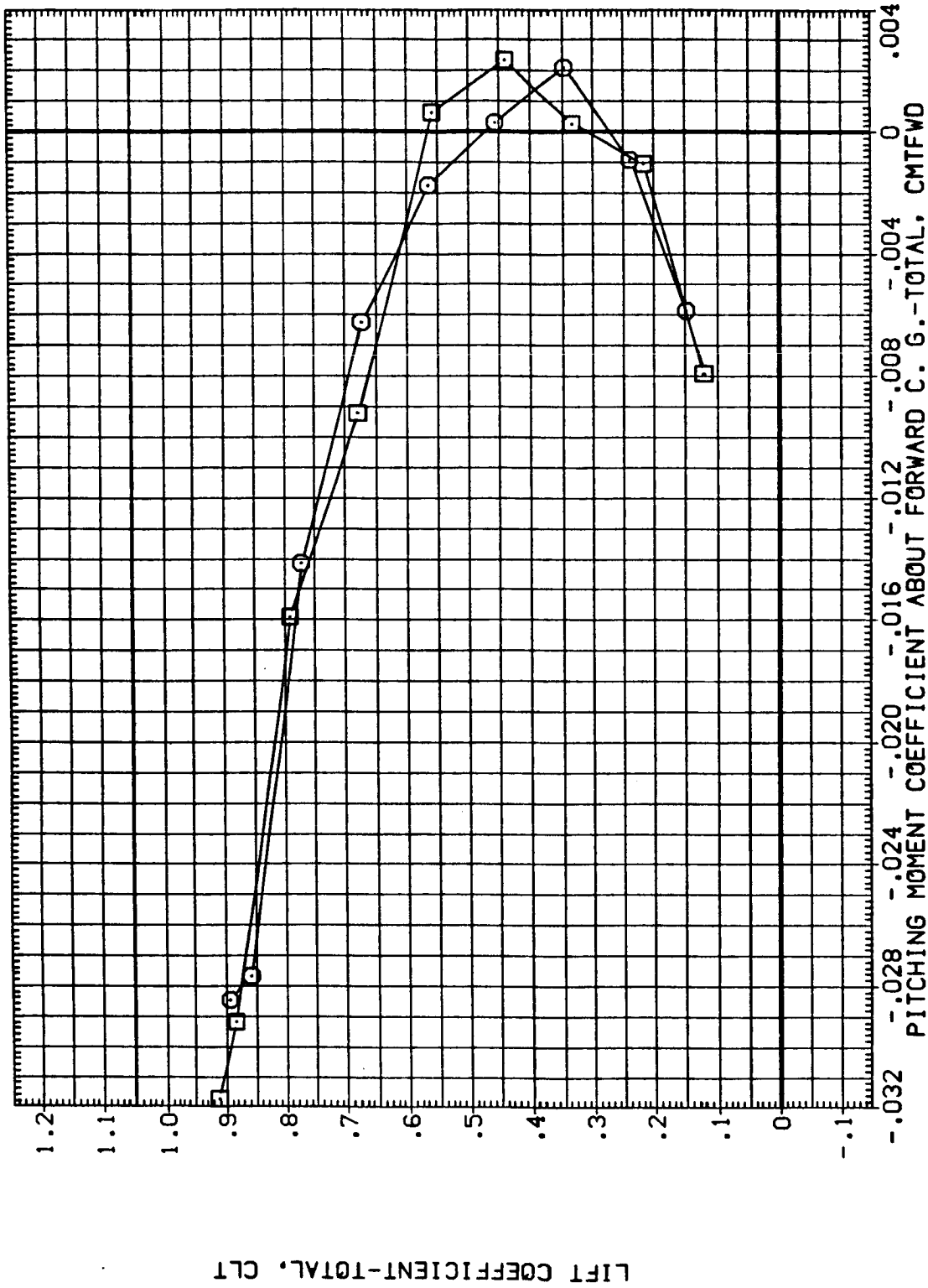


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDRBK	REFERENCE INFORMATION
(EE0007)	AVES 3.5-190 DAS8 (011-H7+M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0023)	AVES 3.5-190 DAS8 (011-H7+M14+N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

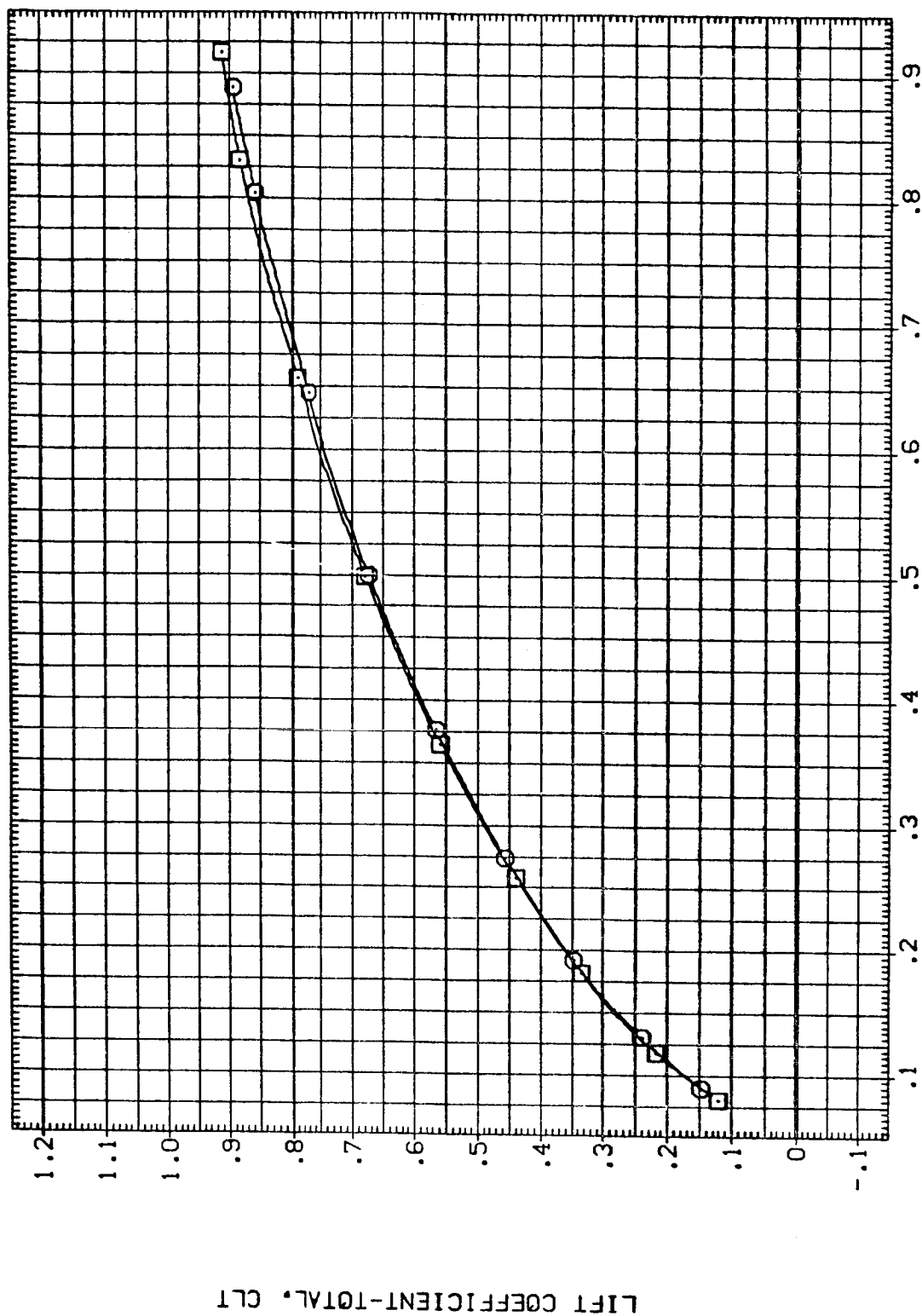


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(EE0007)	AVES 3.5-190 DASS (011-17-M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(EE0023)	AVES 3.5-190 DASS (011-17-M14-N24-DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.X0
						YMRP 1076.7000 IN.Y0
						ZMRP .0000 IN.Z0
						SCALE .0150

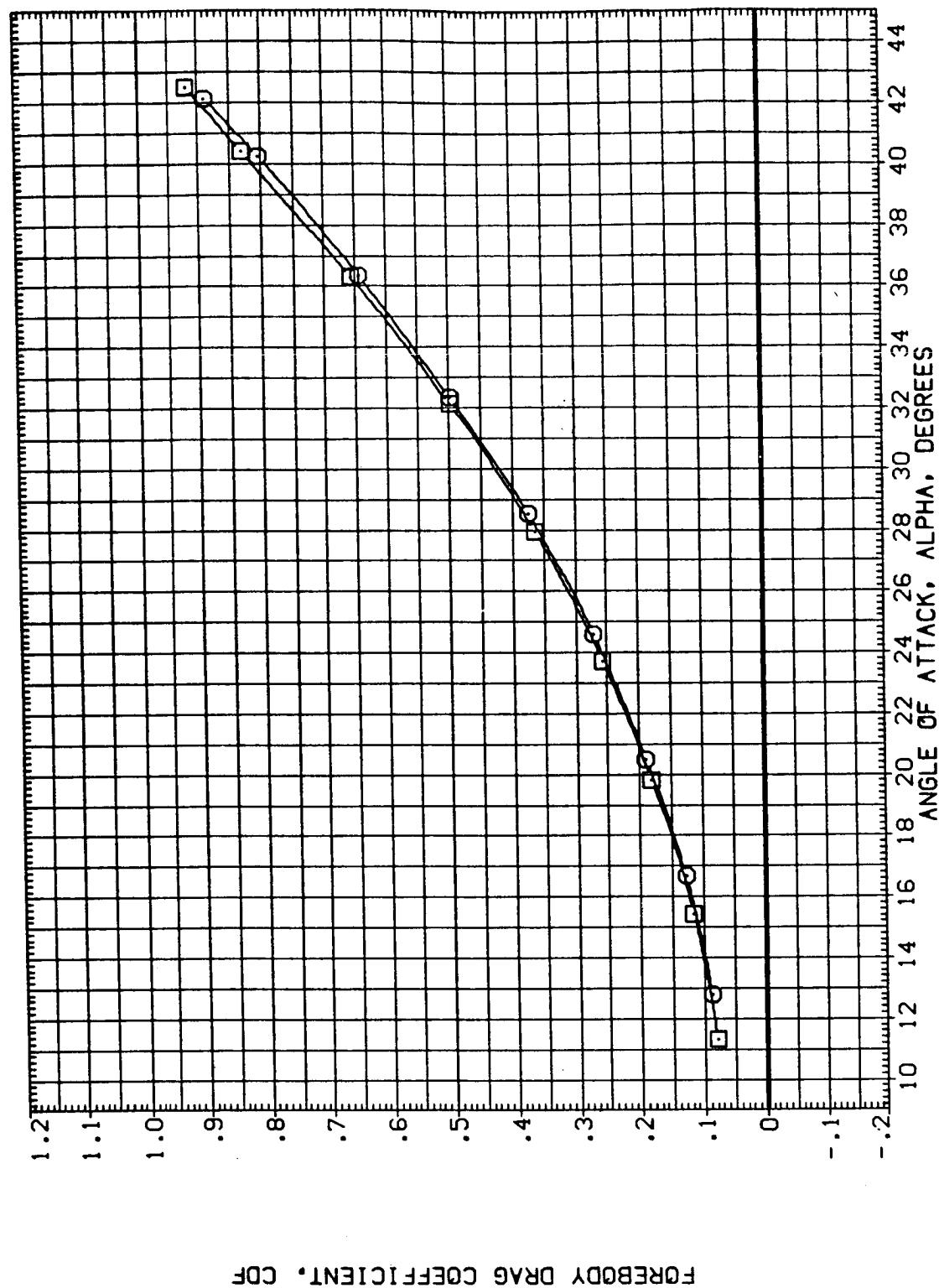


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION			
(EE0007)	AMES 3.5-190 OA98 (011-M7-M14)	5.000	.000	-11.700	55.000	SREF	2690.0000	SQ.FT.	
(EE0023)	AMES 3.5-190 OA98 (011-M7-M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF	474.8000	IN.	
						BREF	936.6800	IN.	
						XMRP	1076.7000	IN. X0	
						YMRP	0.0000	IN. Y0	
						ZMRP	375.0000	IN. Z0	
						SCALE	.0150		

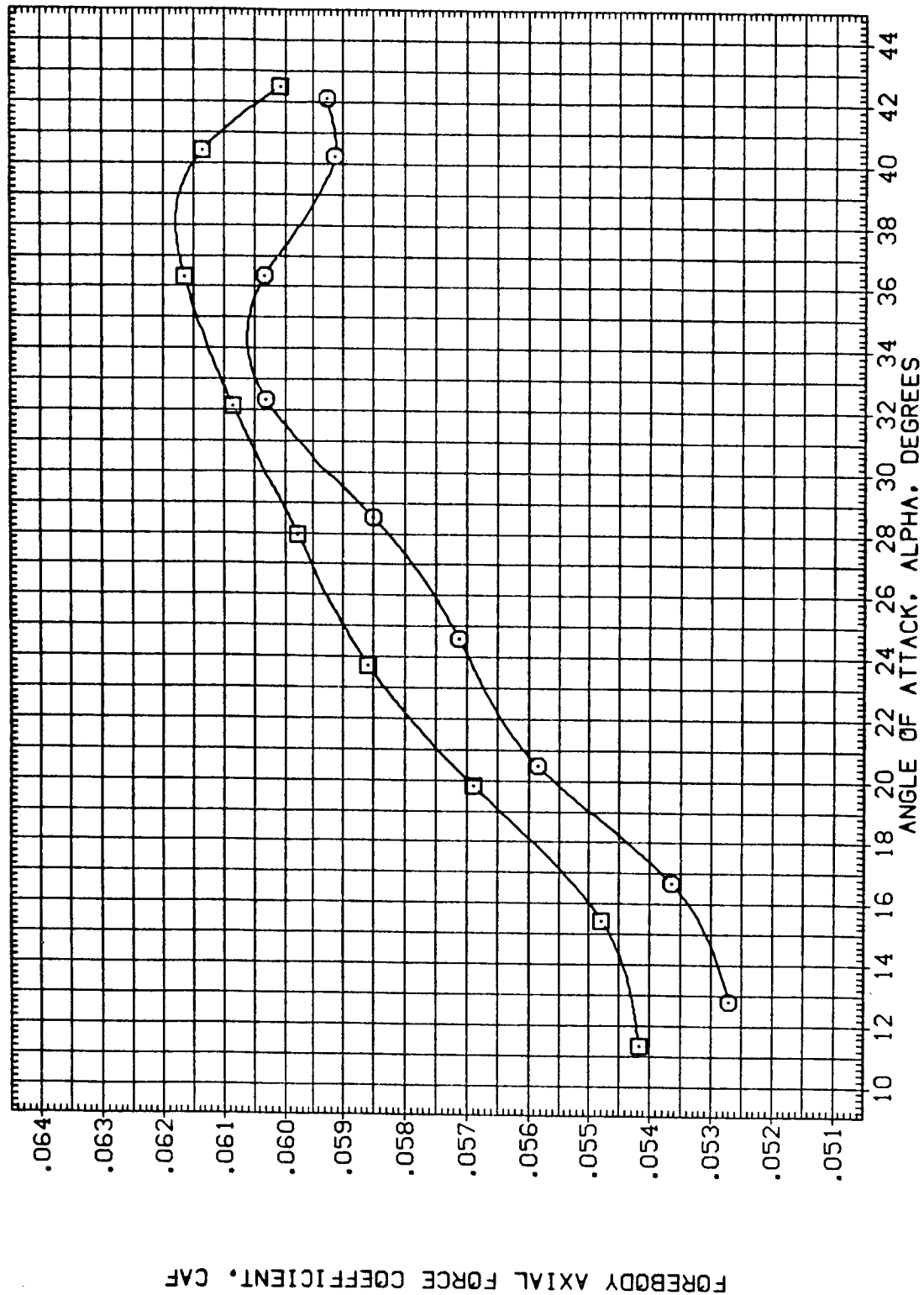


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(EE0007)	□	AMES 3.5-190 OA98 (011-M7+M14)	5.000	.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(EE0023)	□	AMES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF	474.8000 IN.
							BREF	936.6800 IN.
							XMRP	1076.7000 IN.X0
							YMRP	.0000 IN.Y0
							ZMRP	375.0000 IN.Z0
							SCALE	.0150

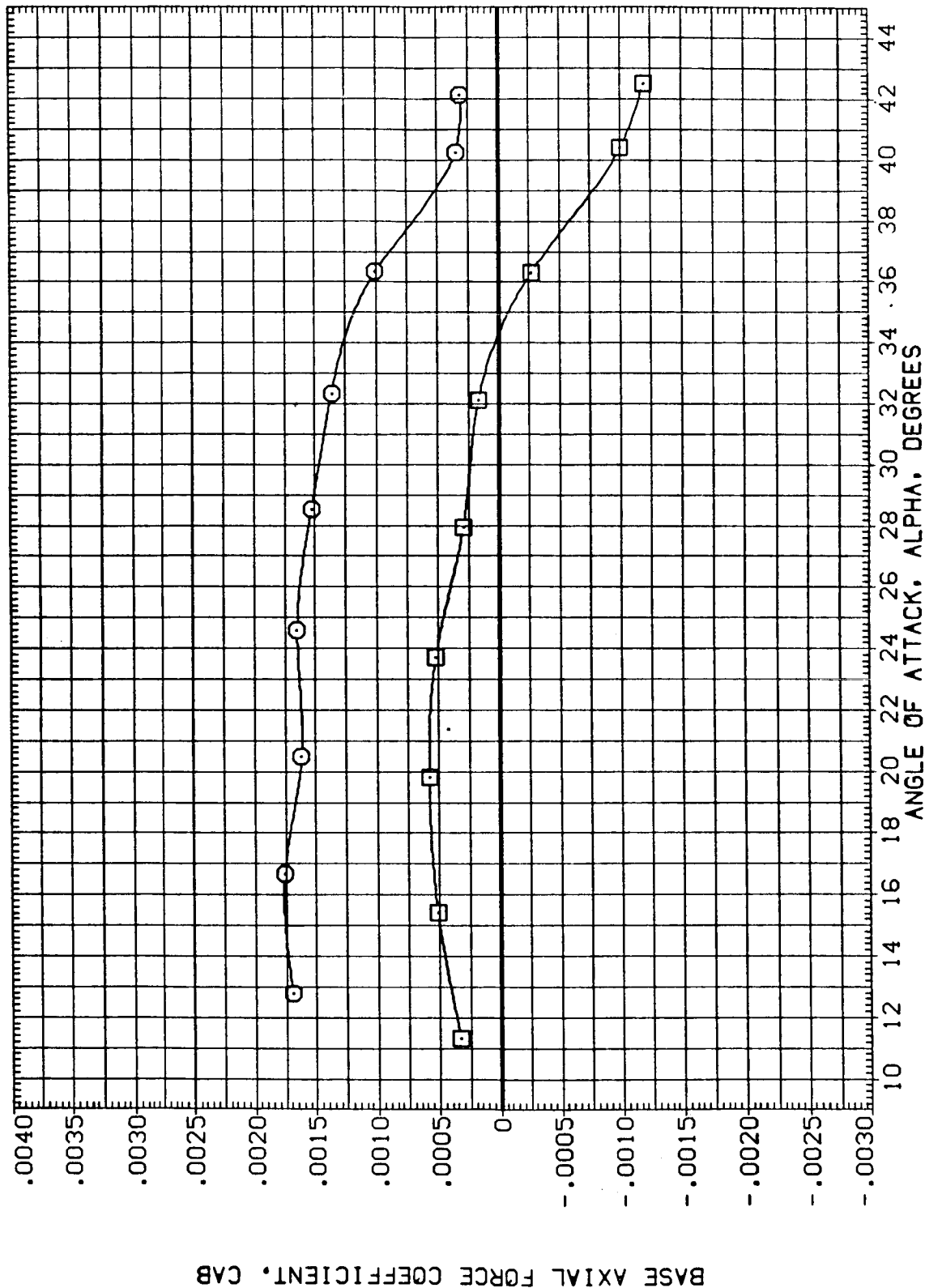


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BEG007)	AYES 3.5-190 OASB (011-M7+M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEG023)	AYES 3.5-190 OASB (011-M7+M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

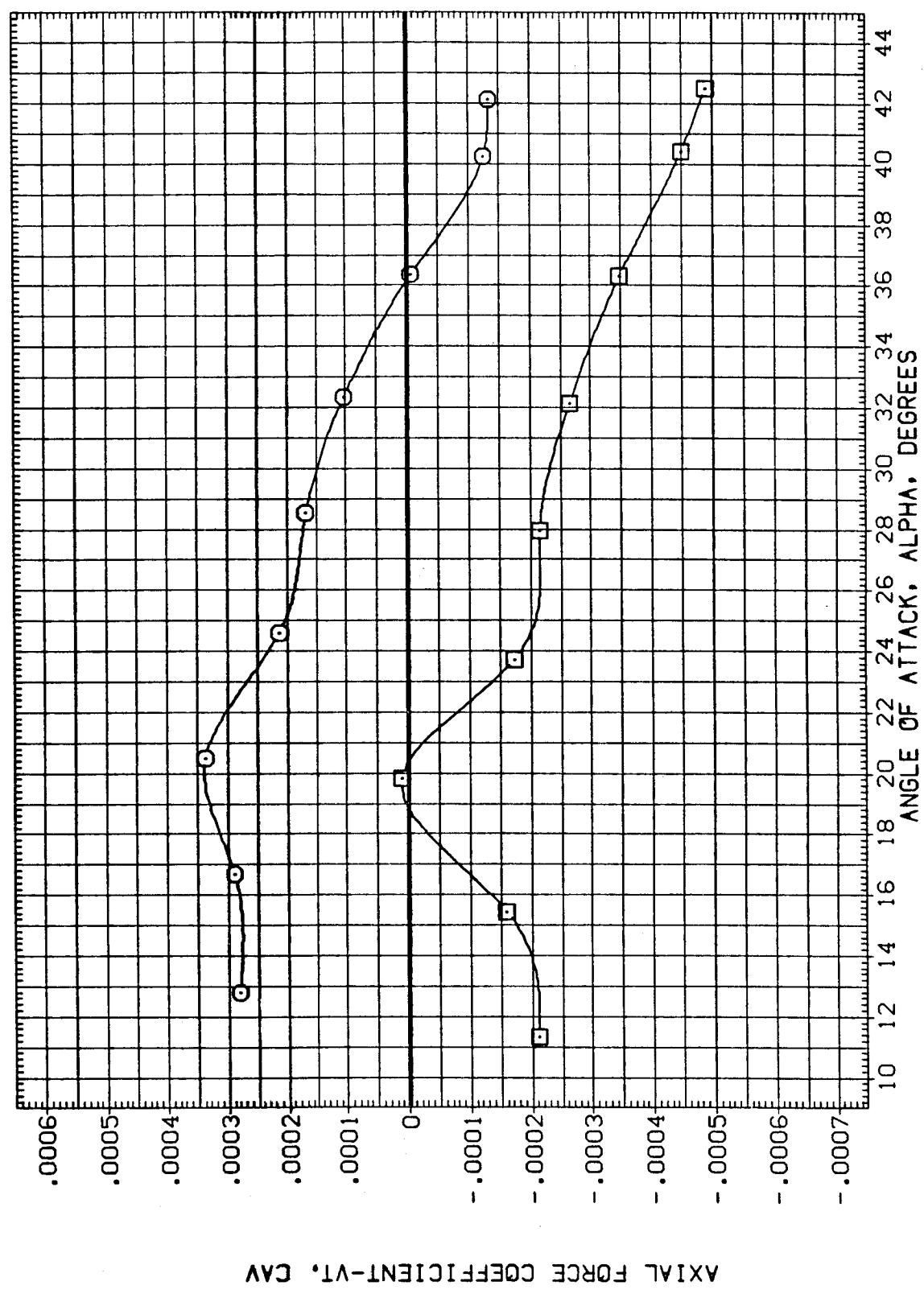


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(BEG007)	AVES 3.5-190 QAS8 (011-47-M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BEG023)	AVES 3.5-190 QAS8 (011-47-M14-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN. X0
						YMRP .0000 IN. Y0
						ZMRP 375.0000 IN. Z0
						SCALE .0150

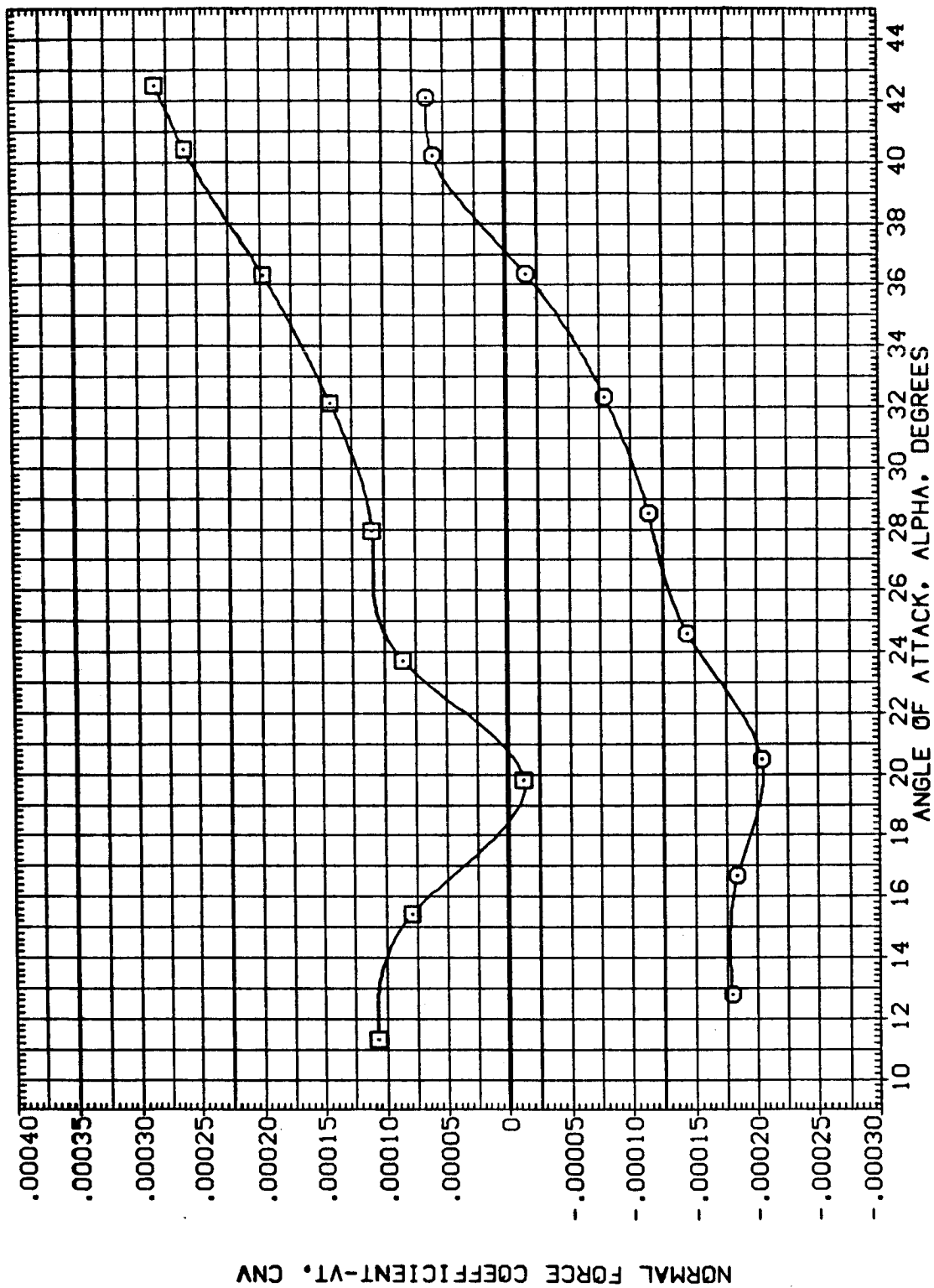


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BDFLAP	SPOBRK	REFERENCE INFORMATION			
(BE0007)	AVES 3.5-190 GA98 (011-M7-M14)	5.000	.000	-11.700	55.000	SREF	2690.0000	SQ.FT.	
(BE0023)	AVES 3.5-190 GA98 (011-M7-M14-N24-DUMMY STING)	5.000	.000	-11.700	55.000	LREF	474.8000	IN.	
						BREF	936.6800	IN.	
						XMRP	1076.7000	IN.X0	
						YMRP	.0000	IN.Y0	
						ZMRP	375.0000	IN.Z0	
						SCALE	.0150		

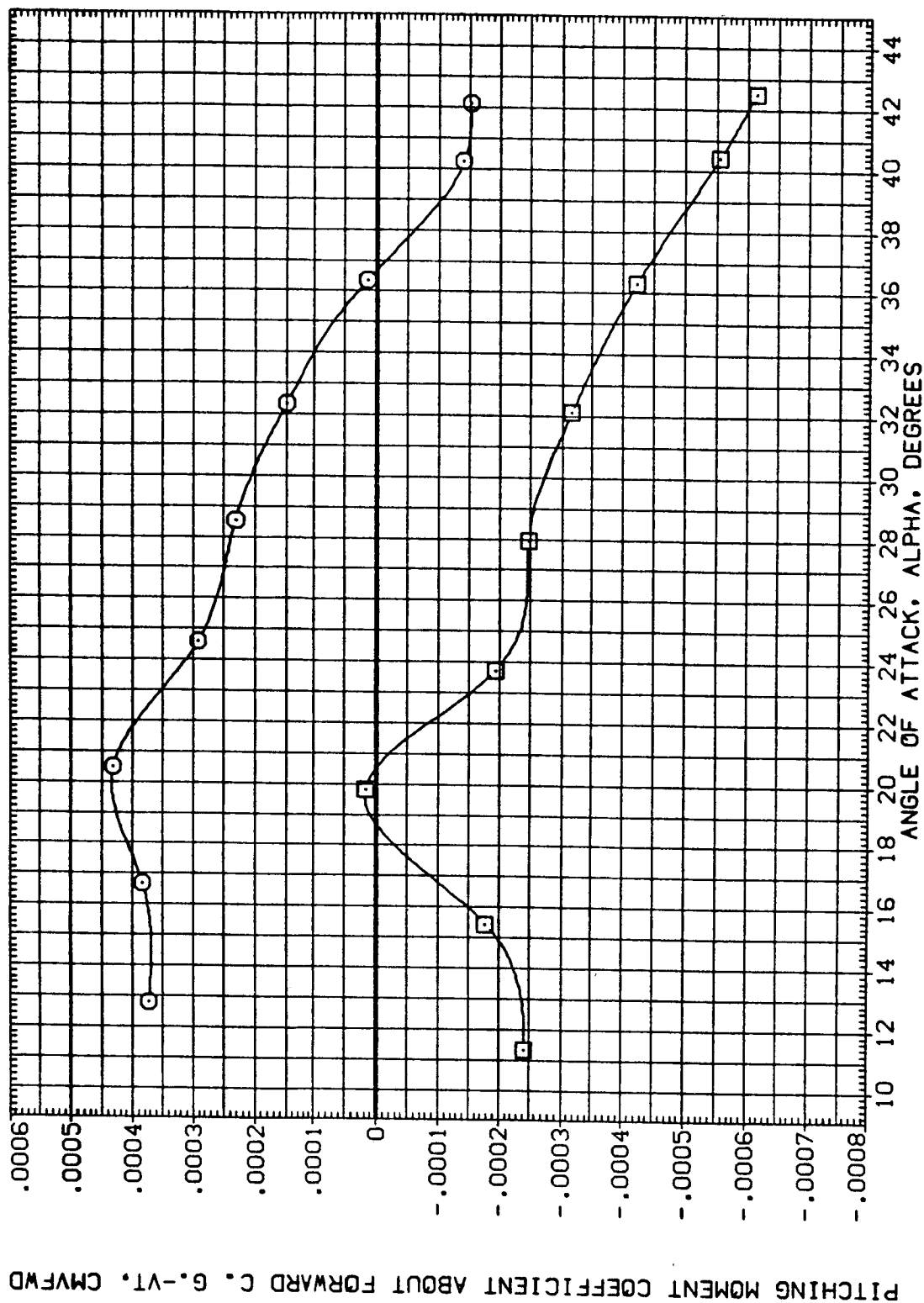


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPDBRK	REFERENCE INFORMATION
(BE0007)	AVES 3.5-190 0A98 (011-17+114)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(BE0023)	AVES 3.5-190 0A98 (011-17+114-N24+DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

PITCHING MOMENT COEFFICIENT ABOUT AFT C. G.-VT. CMVAFT

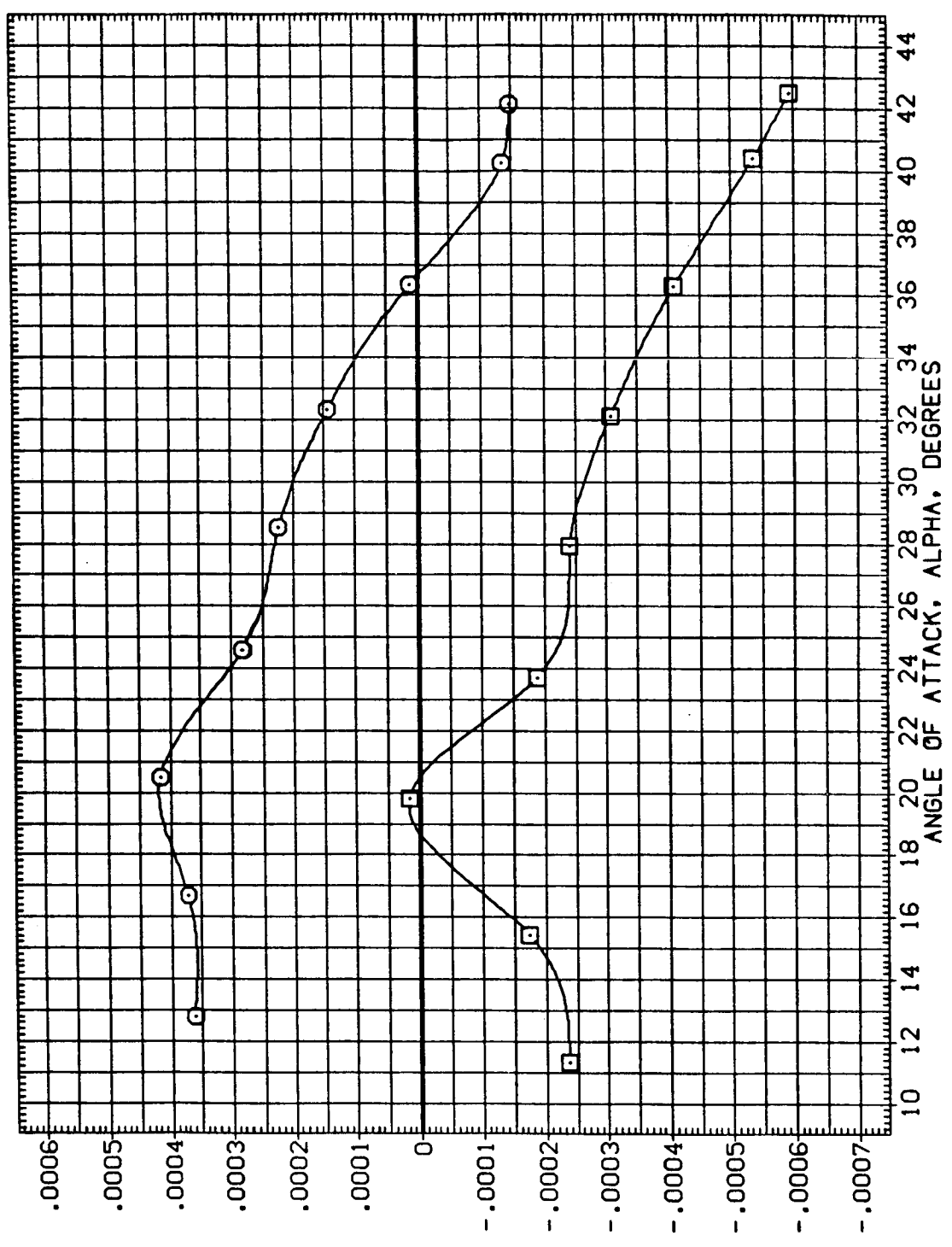


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

CAJMACB = 10.27

AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE023)

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON		SREF	50.FT.	
O	10.300	-11.700	.000	LREF	474.8000	IN.	
			55.000	BREF	936.6800	IN.	
				XMRP	1076.7000	IN. X0	
				YMRP	375.0000	IN. Y0	
				ZMRP	0.0150	IN. Z0	
				SCALE			

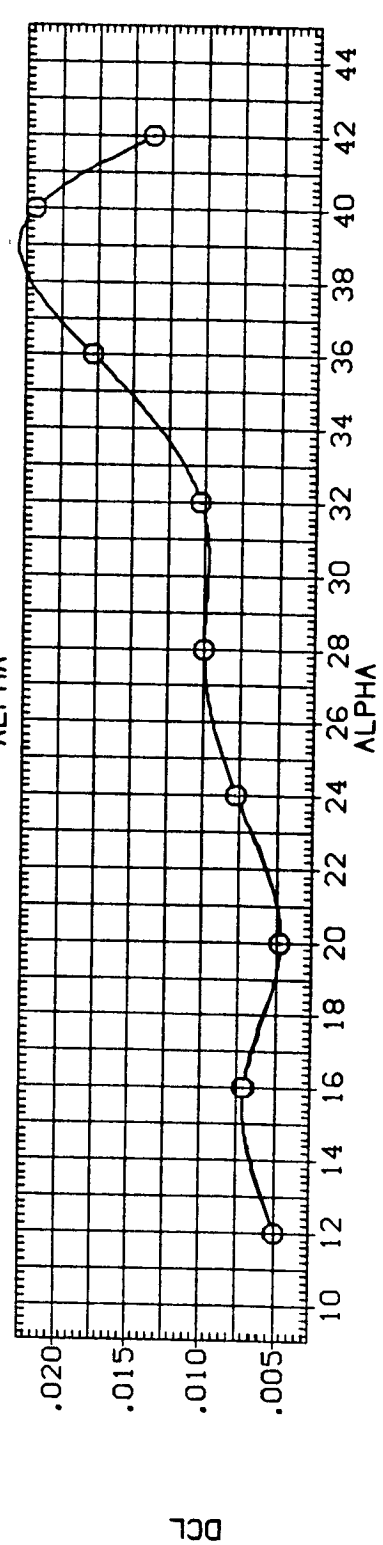
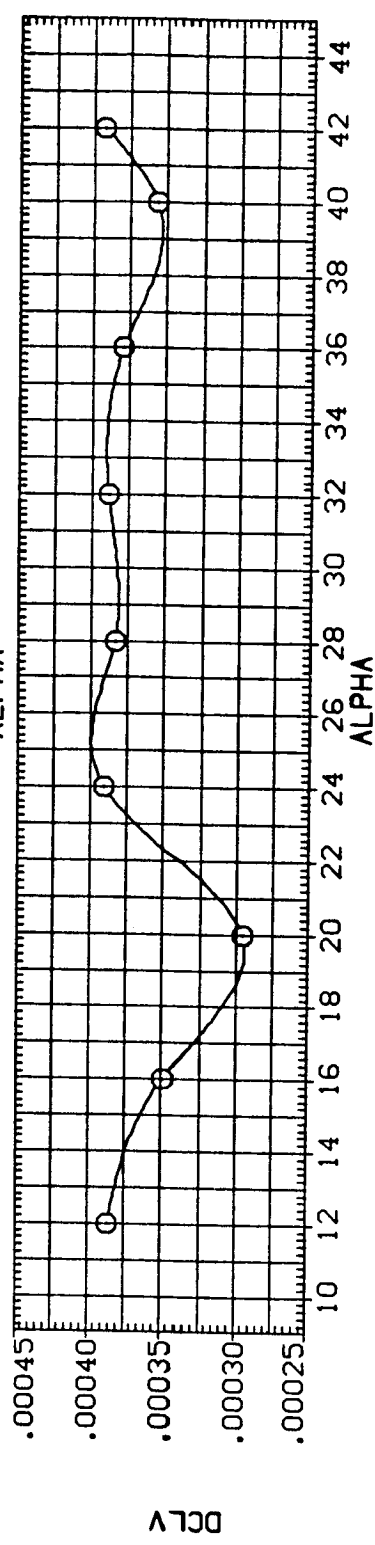
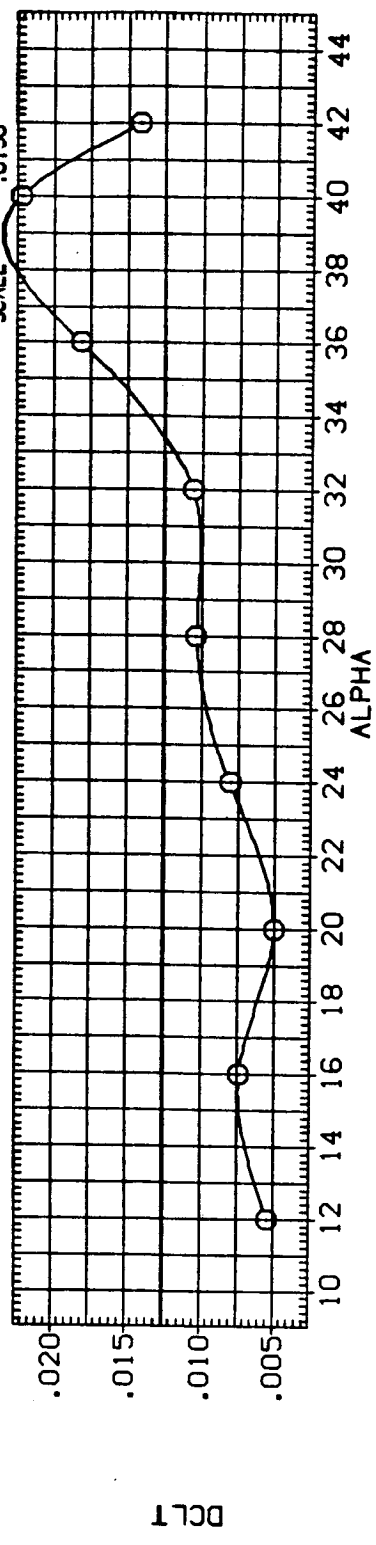


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL  
O

MACH  
10.300

BETA  
BOFLAP  
RUDDER

PARAMETRIC VALUES  
5.000 ELEVON  
-11.700 SPOBRK  
.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

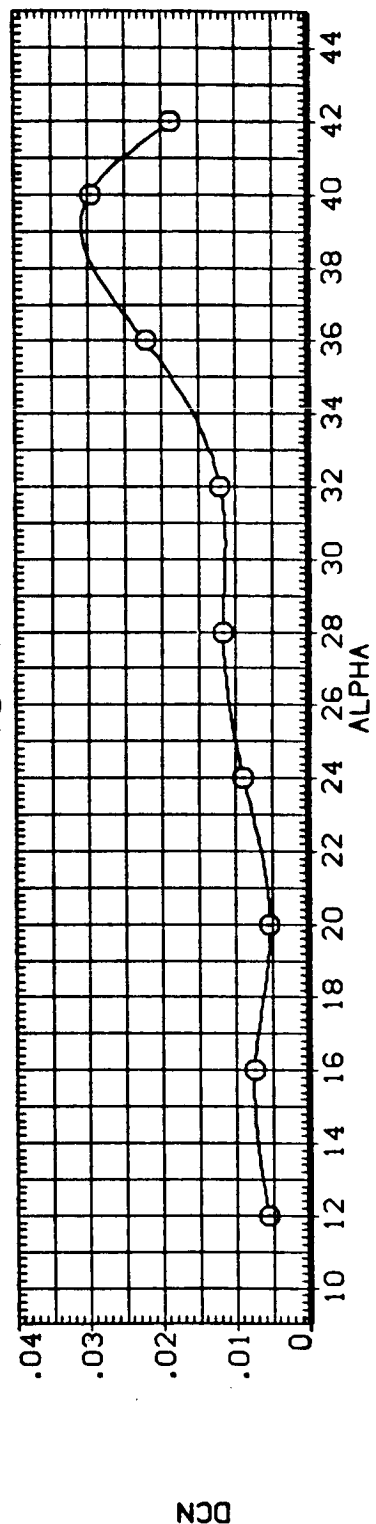
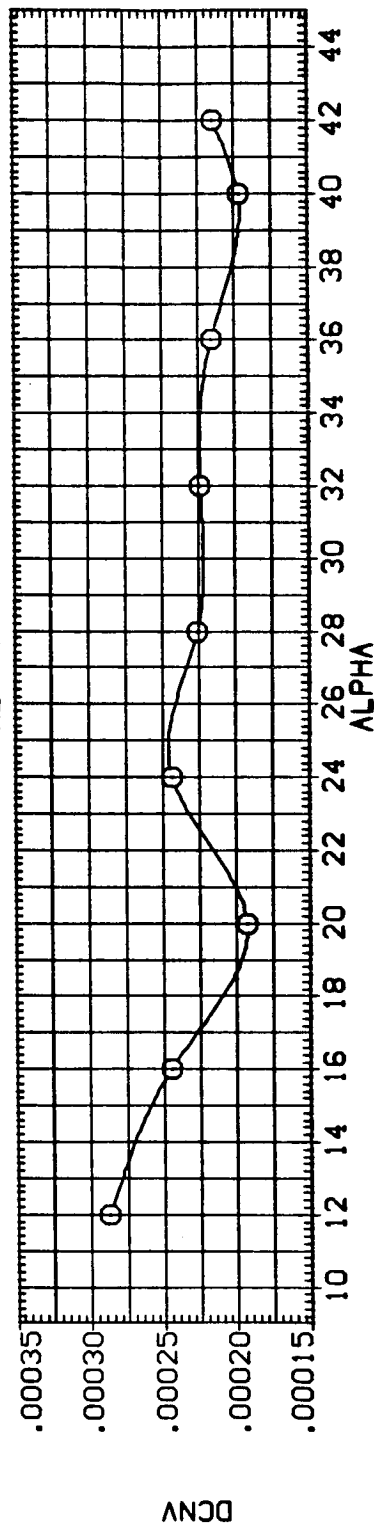
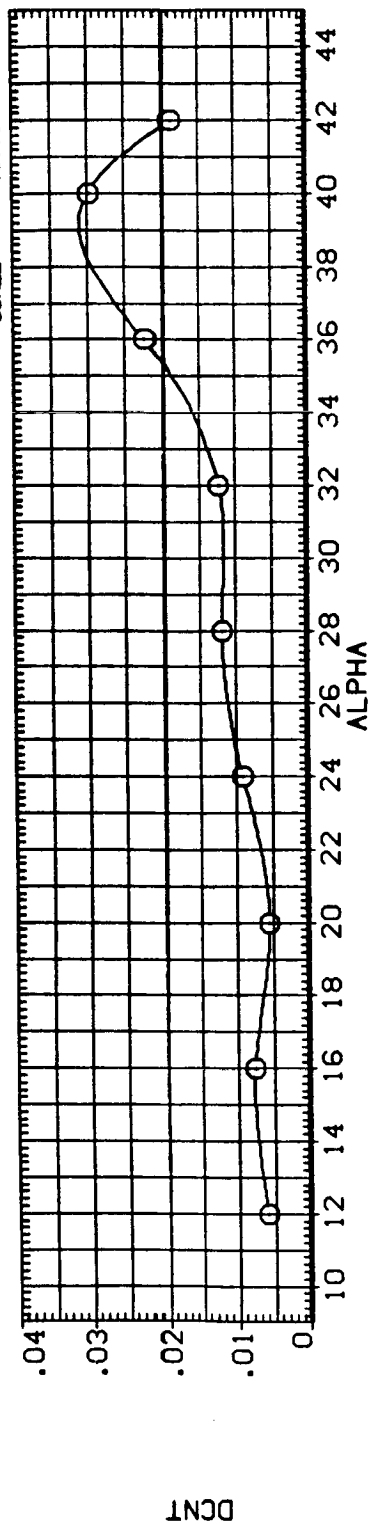


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (ZE0023)

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON	SPOBRK	SREF	SO.FT.	IN.
○	10.300	5.000	.000	55.000	LREF	474.8000	IN.
		BDFLAP	-11.700	.000	BREF	936.6800	IN.
		RUDDER	.000		XMRP	1076.7000	IN.
					YMRP	.0000	IN.
					ZMRP	375.0000	IN.
					SCALE	.0150	

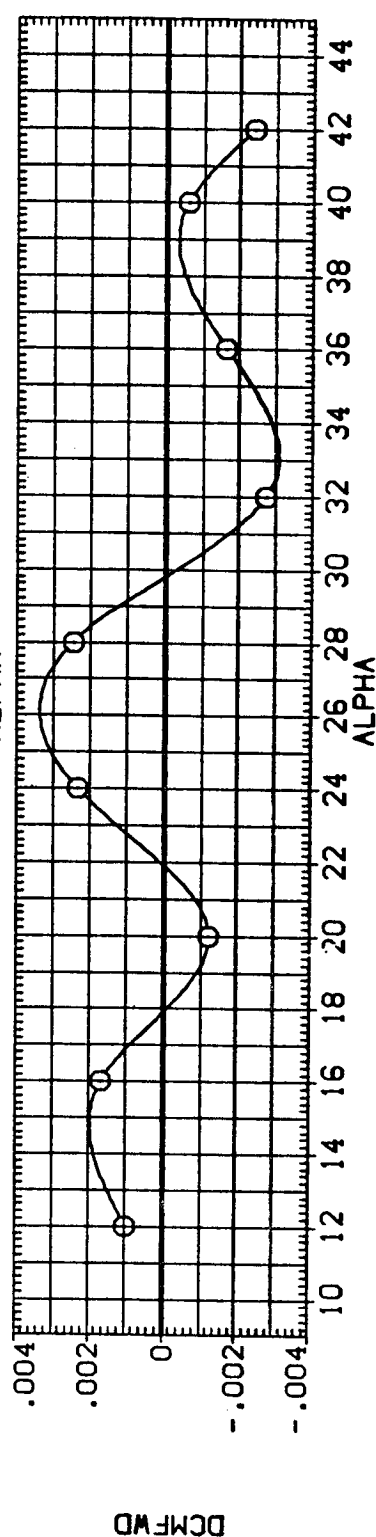
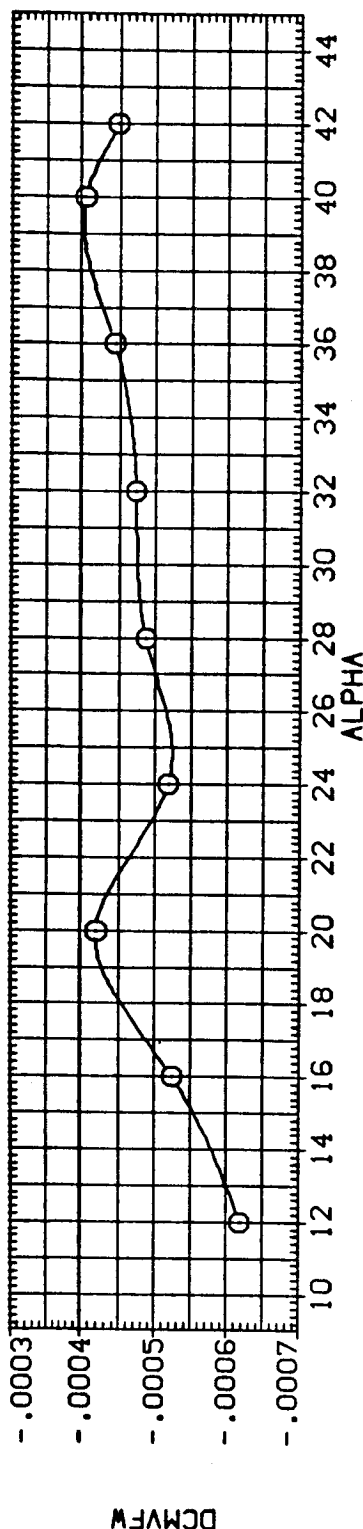
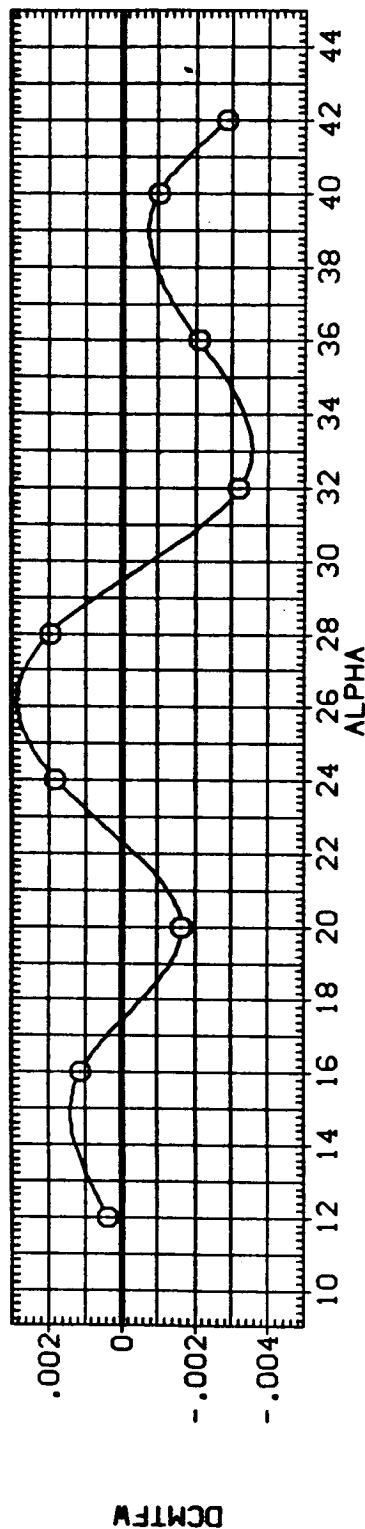


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON	SCALE	SREF	SO.FT.	IN.
○	10.300	-11.700	.000	.000	2690.0000	474.8000	IN.
		BOFLAP	SPDRBK	55.000	936.6800	1076.7000	IN. 20
		RUDDER			YMRP	ZMRP	IN. 10
					SCALE		IN. 20
							.0150

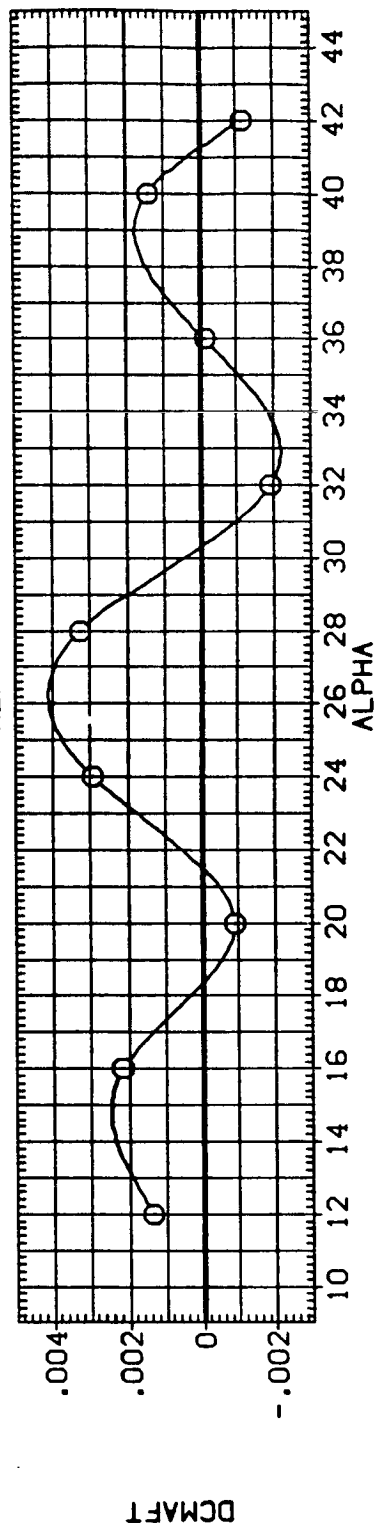
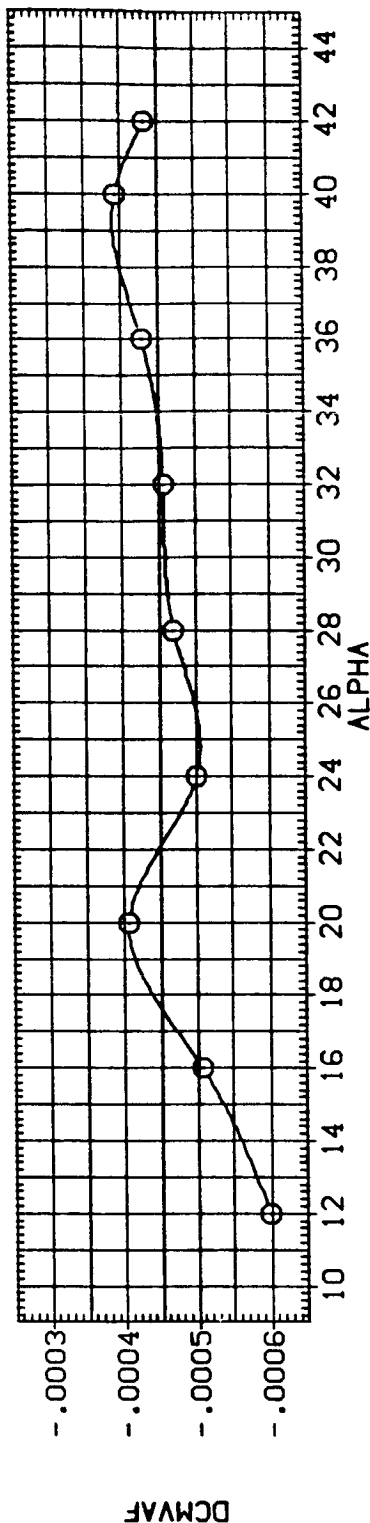
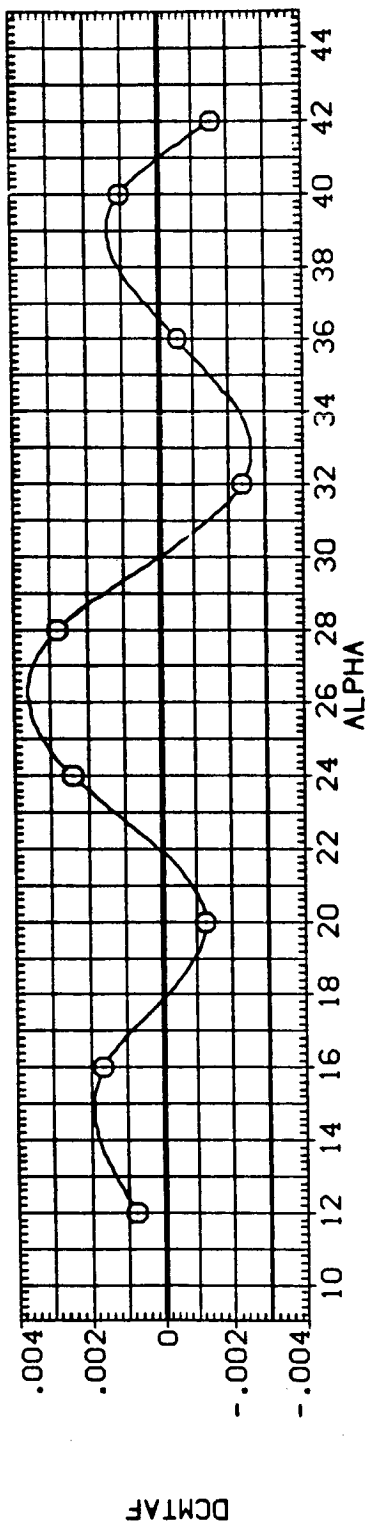


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (1EQ023)

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON	SPDRBK	SREF	LREF	SO.FT.
0	10.300	-11.700	.000	55.000	2690.0000	474.8000	IN.
		RUDDER			936.6800	1076.7000	IN.
					375.0000		IN.X0
							IN.Y0
							IN.Z0
							SCALE
							.0150

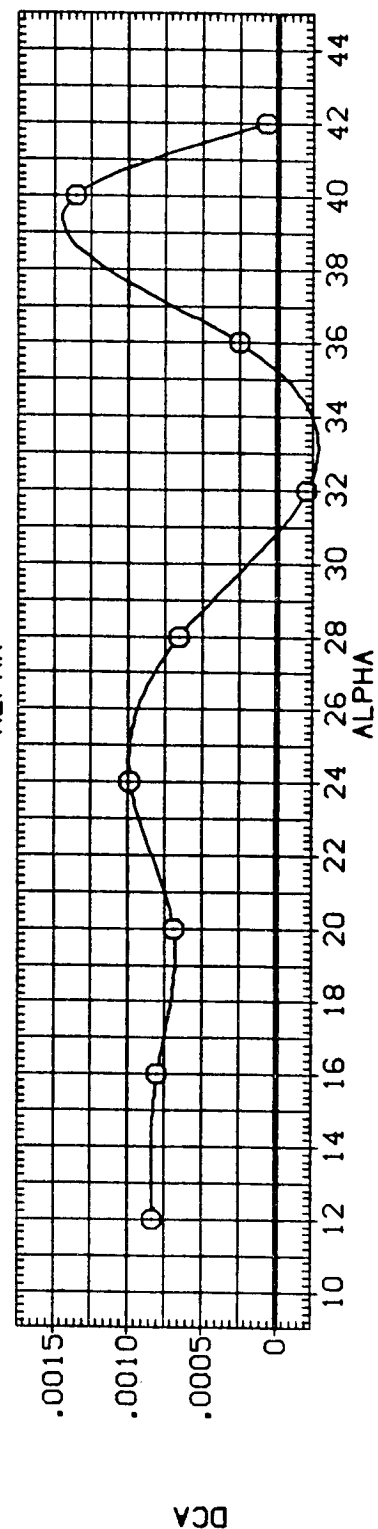
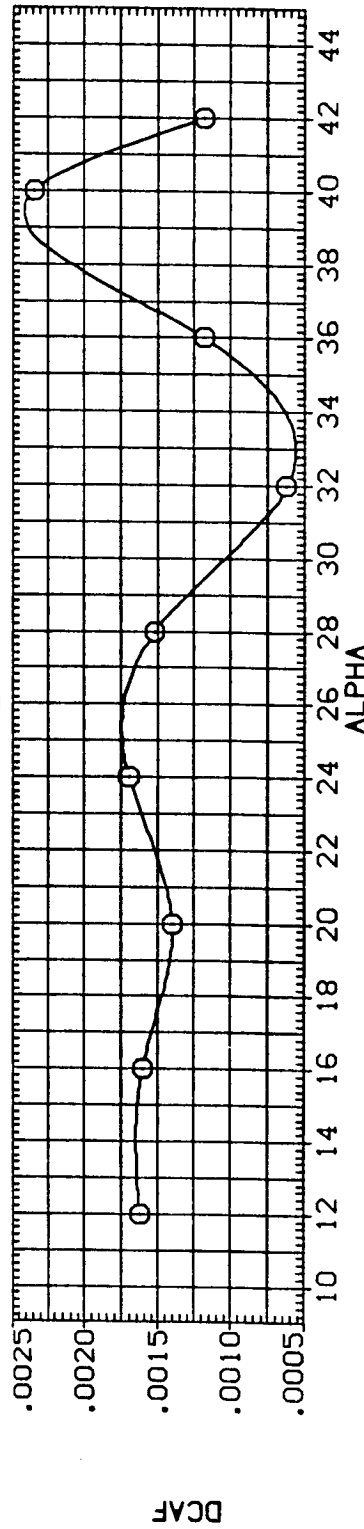
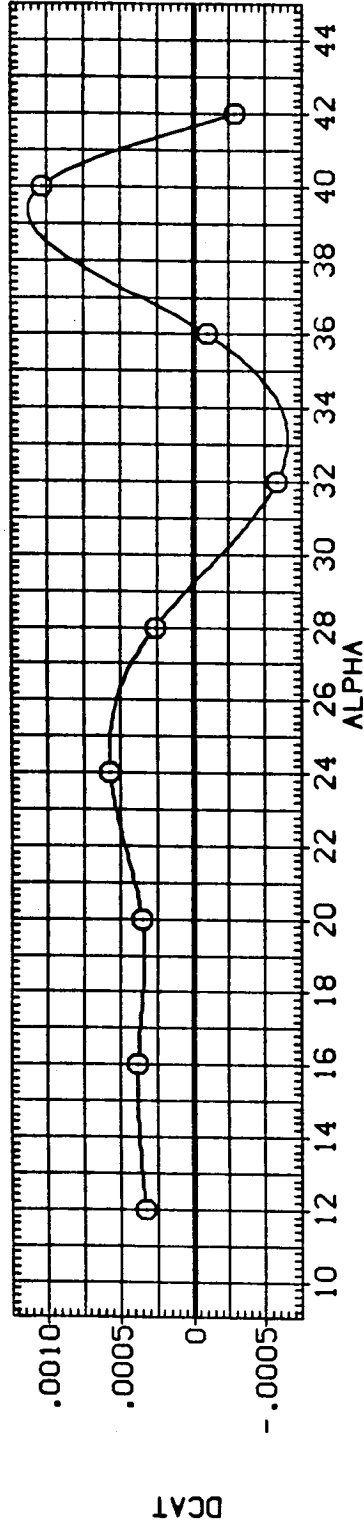


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON	SPOBRK	SREF	SQ.FT.	IN.
○	10.300	5.000	.000	.000	2690.0000	474.8000	IN.
		BOFLAP	-11.700	.000	936.6800	1076.7000	IN. X0
		RUDDER			375.0000		IN. Y0
					SCALE	.0150	IN. Z0

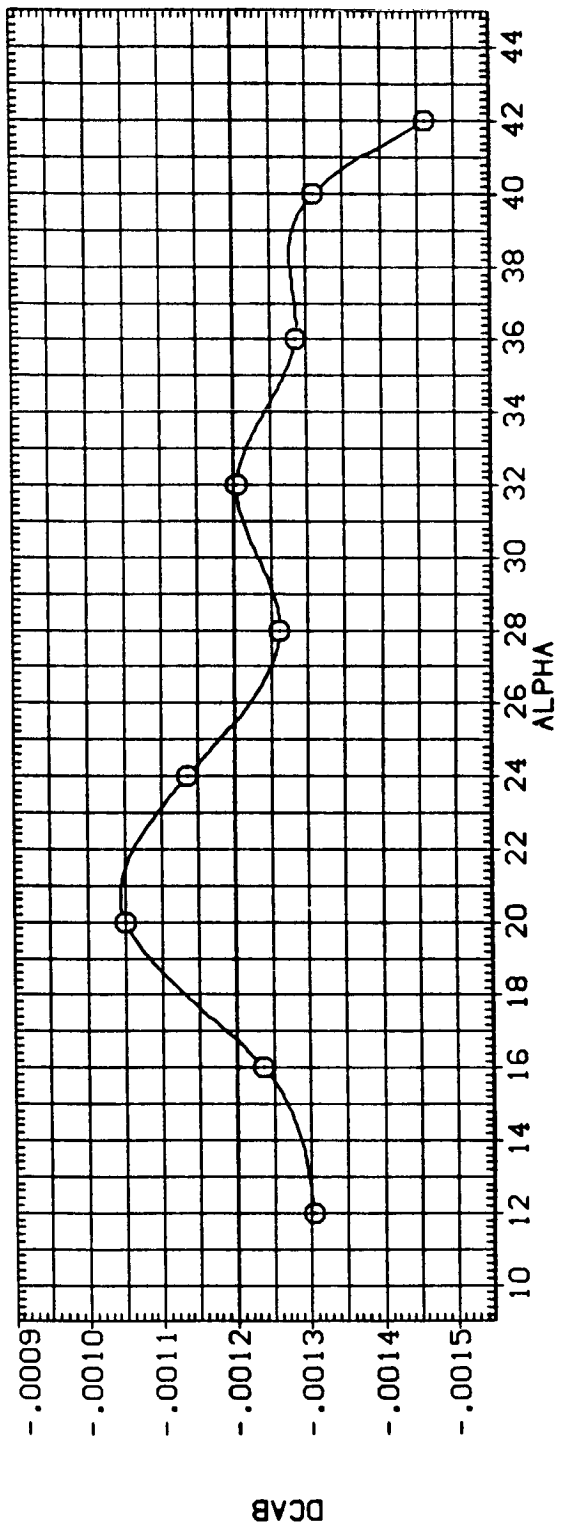
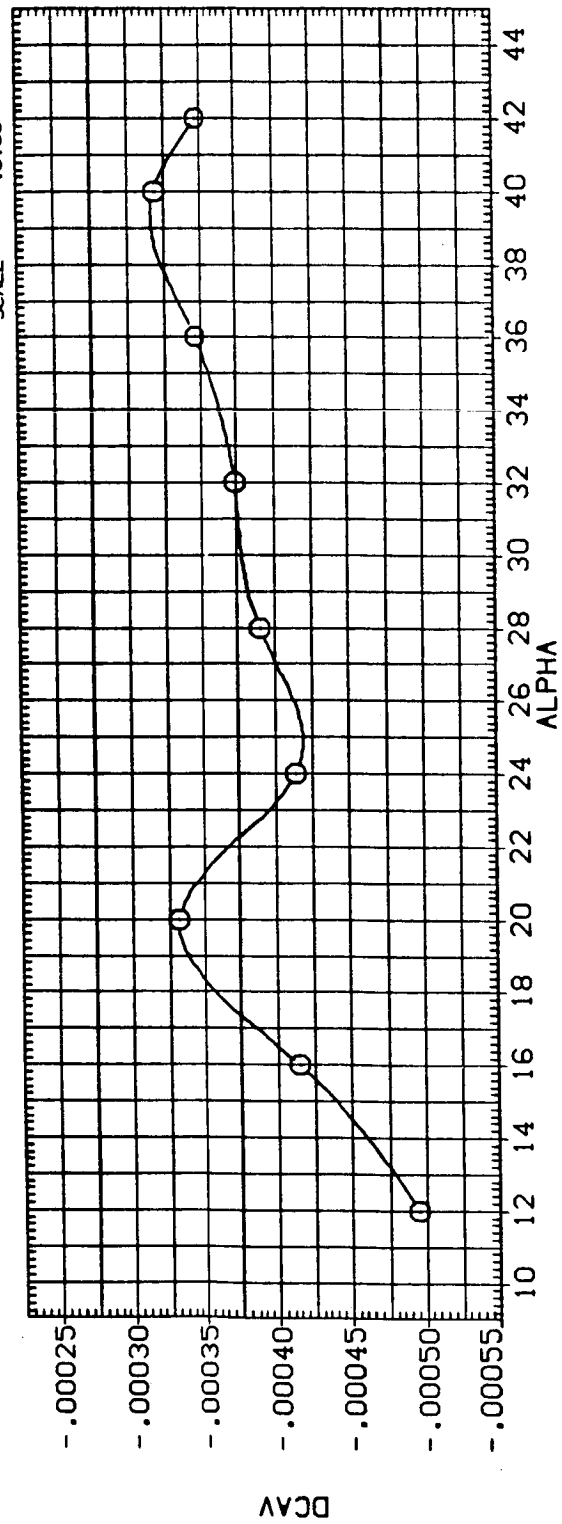


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



# AMES 3.5-190 0A98 (011-M7+M14-N24+DUMMY STING) (YE0023)

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON	SPDRBK	SREF	2690.0000	50.FT.
	10.300	-11.700	.000	55.000	LREF	474.8000	IN.
					BREF	936.6800	IN.
					XMRP	1076.7000	IN. X0
					YMRP	.0000	IN. Y0
					ZMRP	375.0000	IN. Z0
					SCALE	.0150	

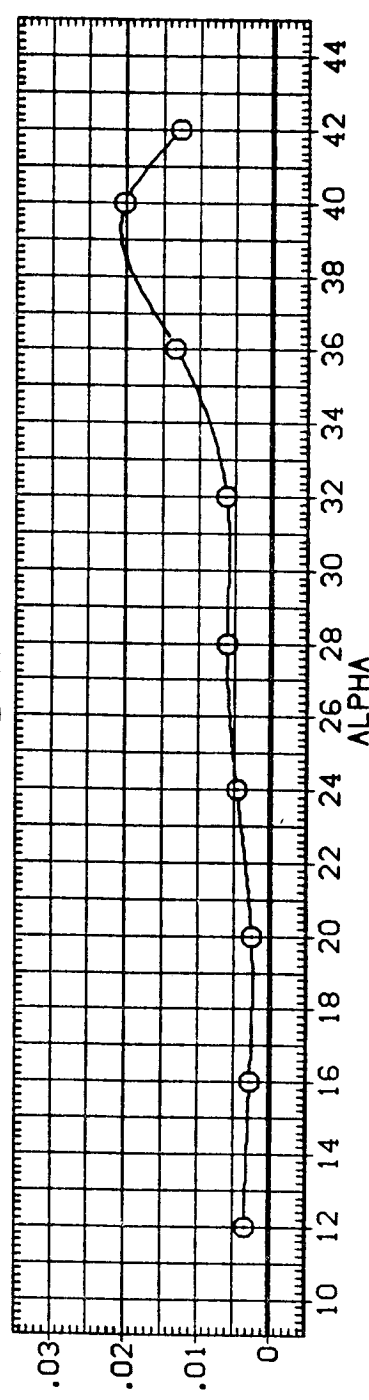
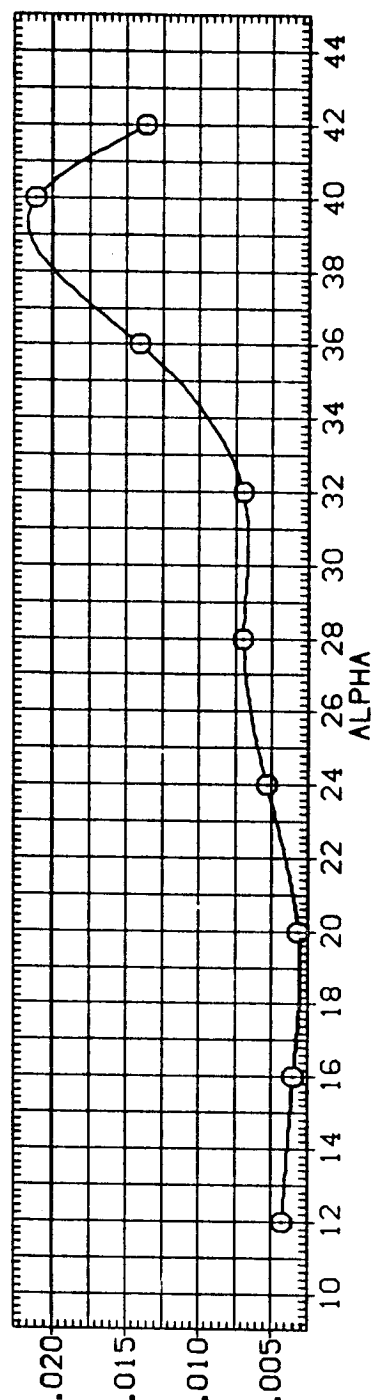
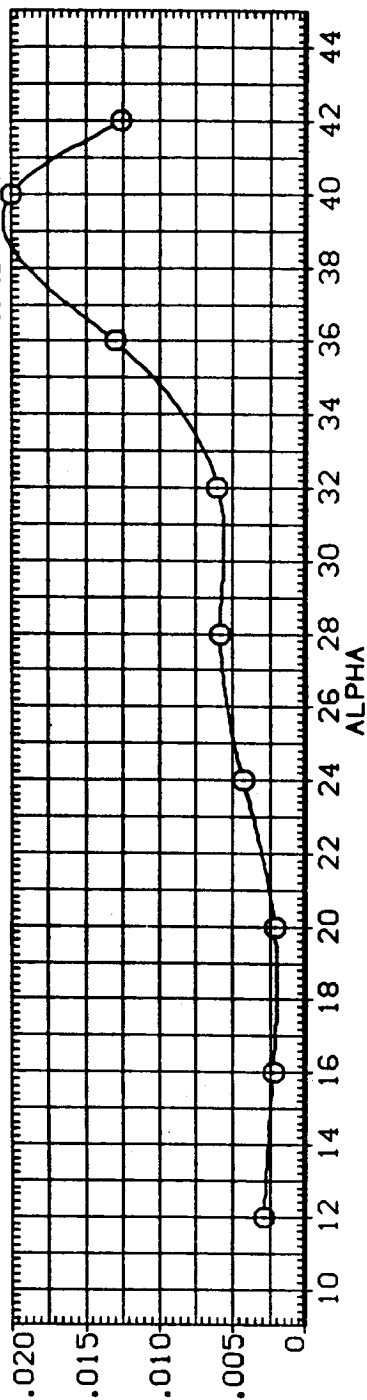


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
		BETA	ELEVON	SPDRK	SREF	LREF	SO.FT.
○	10.300	-11.700	5.000	.000	2690.0000	474.8000	IN.
		BOFLAP	SPDRK	55.000	936.6800	1076.7000	IN.
		RUDDER	.000		375.0000	375.0000	IN.Y0
					SCALE	.0150	IN.Z0

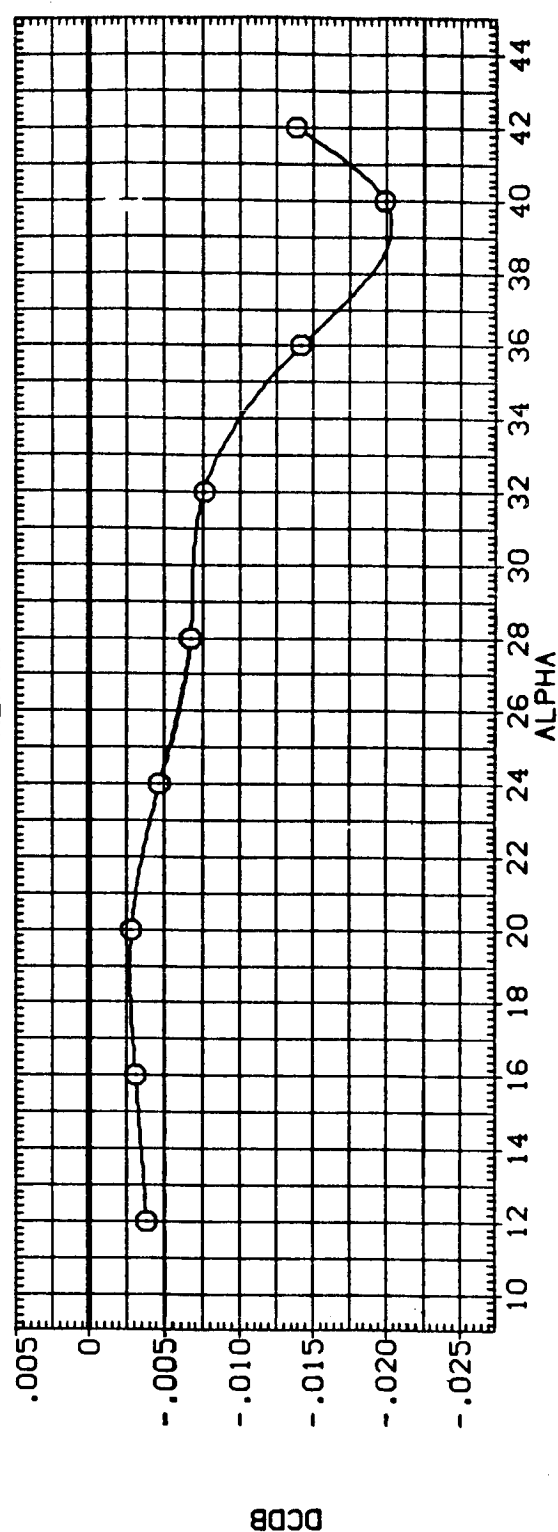
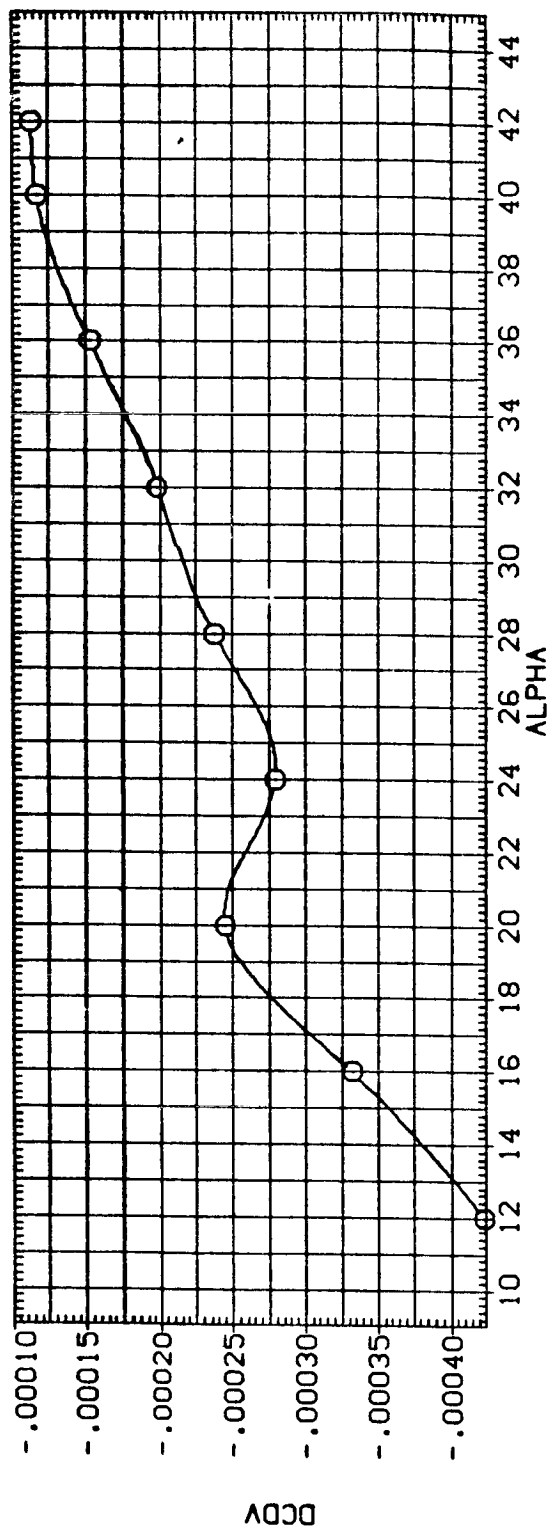


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(AEQ007)	AVES 3.5-190 0A98 (011-M7-M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(AEQ023)	AVES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING)	5.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.XB
						YMRP .0000 IN.YB
						ZMRP 375.0000 IN.ZB
						SCALE .0150

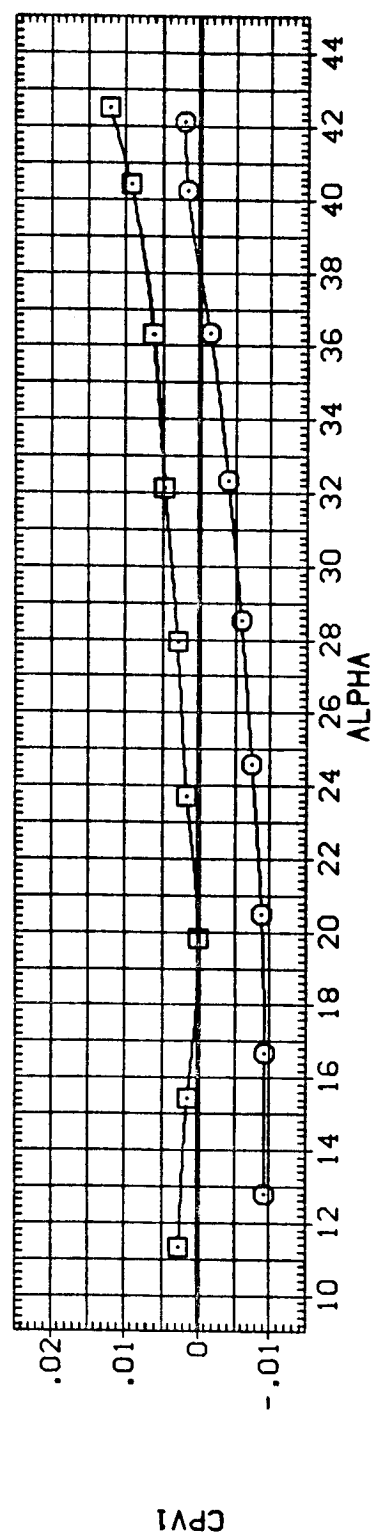
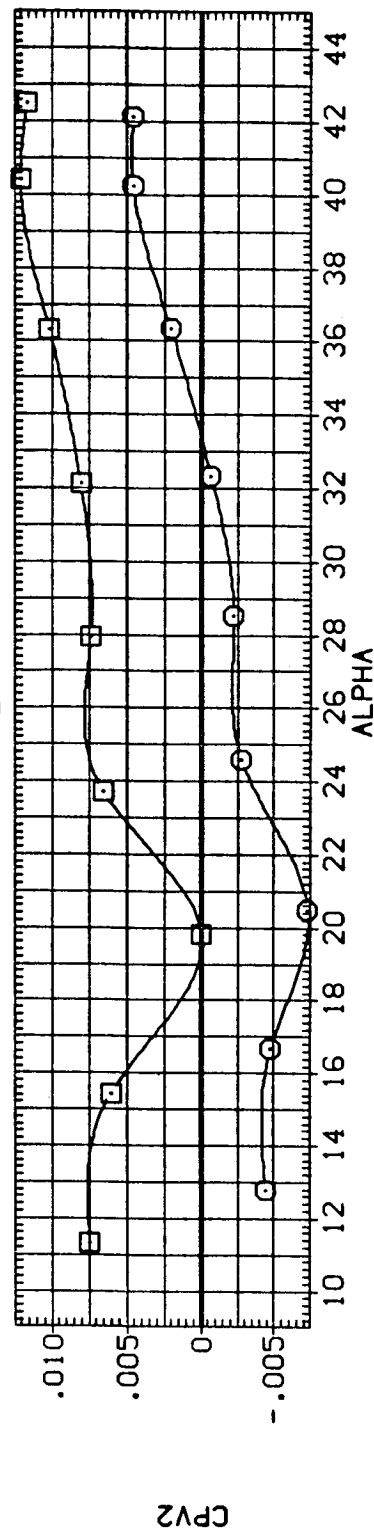
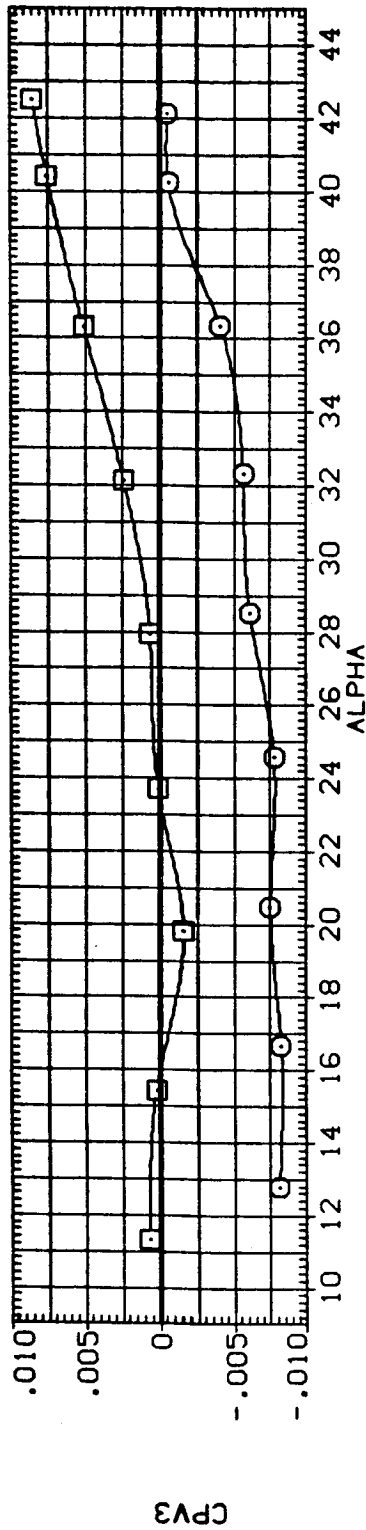


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(M)MACH = 10.27

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(AEG007) AMES 3.5-190 0A98 (011-M7+M14)  
 (AEG023) AMES 3.5-190 0A98 (011-M7+M14-N24+DUPPY STING)

BETA ELEVON BOFLAP SPOBRK

5.000 .000 -11.700 55.000  
 5.000 .000 -11.700 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 YMRP 1076.7000 IN.X0  
 ZMRP .0000 IN.Y0  
 375.0000 IN.Z0  
 SCALE .0150

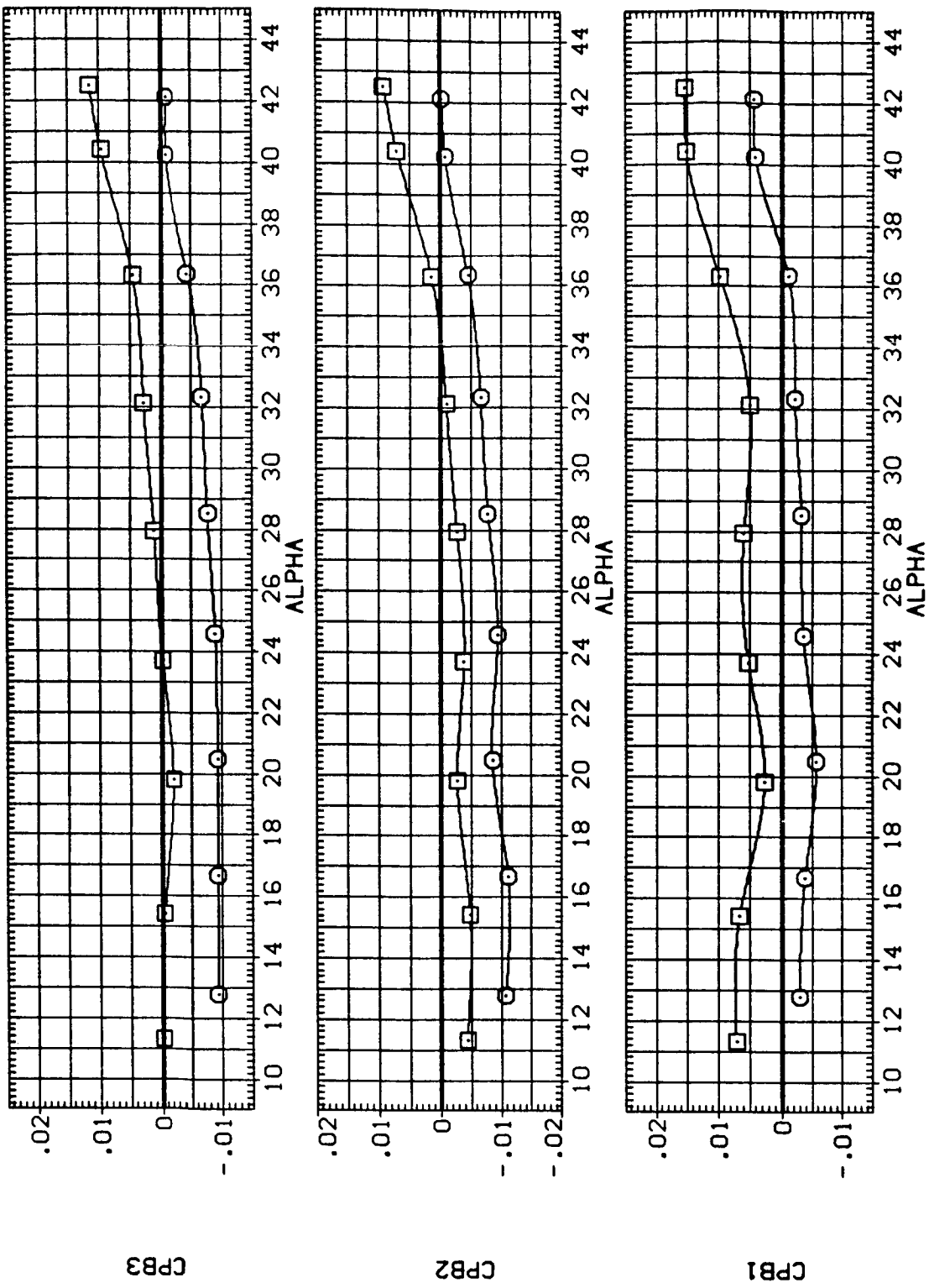


FIG. 8 STING AND NOZZLE TARES, LONGITUDINAL.

(A)MACH = 10.27

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION
(2E0007)	AMES 3.5-190 0A98 (011-M7+M14)	5.000	.000	-11.700	55.000	SREF 2690.0000 SQ.FT.
(2E0001)	AMES 3.5-190 0A98 (011-M7+M14)	.000	.000	-11.700	55.000	LREF 474.8000 IN.
						BREF 936.6800 IN.
						XMRP 1076.7000 IN.X0
						YMRP .0000 IN.Y0
						ZMRP 375.0000 IN.Z0
						SCALE .0150

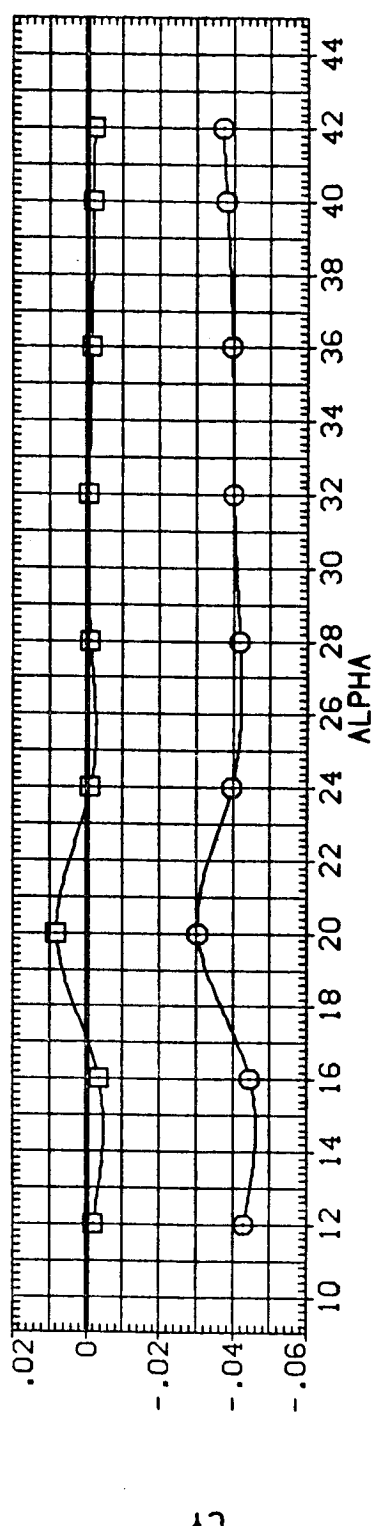
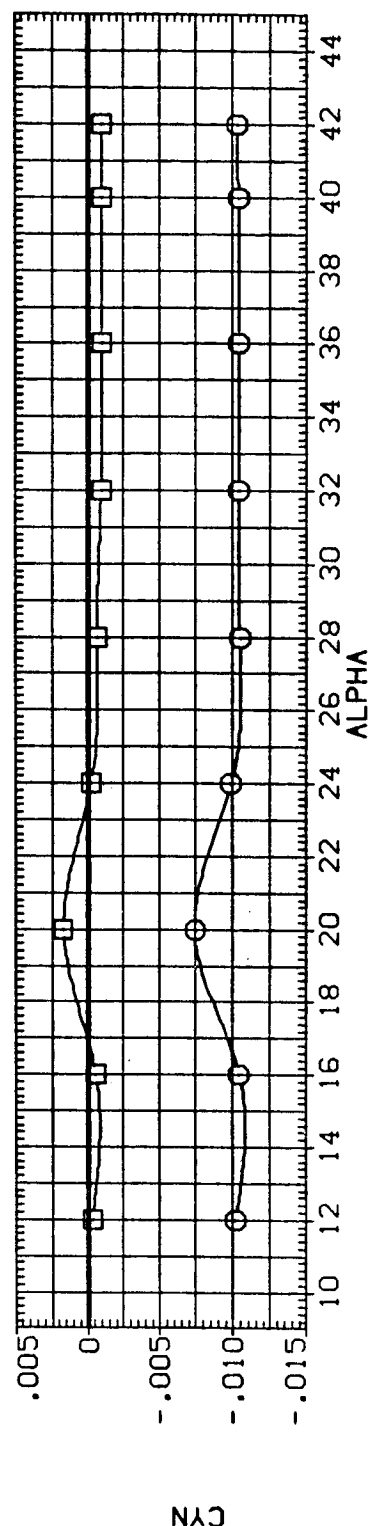
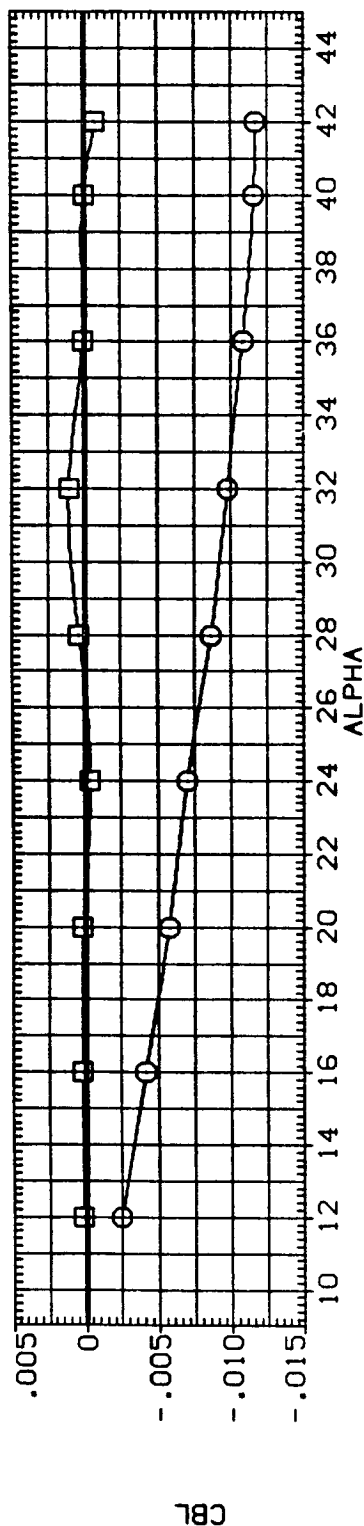


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

(A)MACH = 10.30

SYMBOL MACH  
O 10.300

PARAMETRIC VALUES  
DBETA 5.000 ELEVON .000  
BOFLAP -11.700 SPOBRK 55.000  
RUDDER .000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

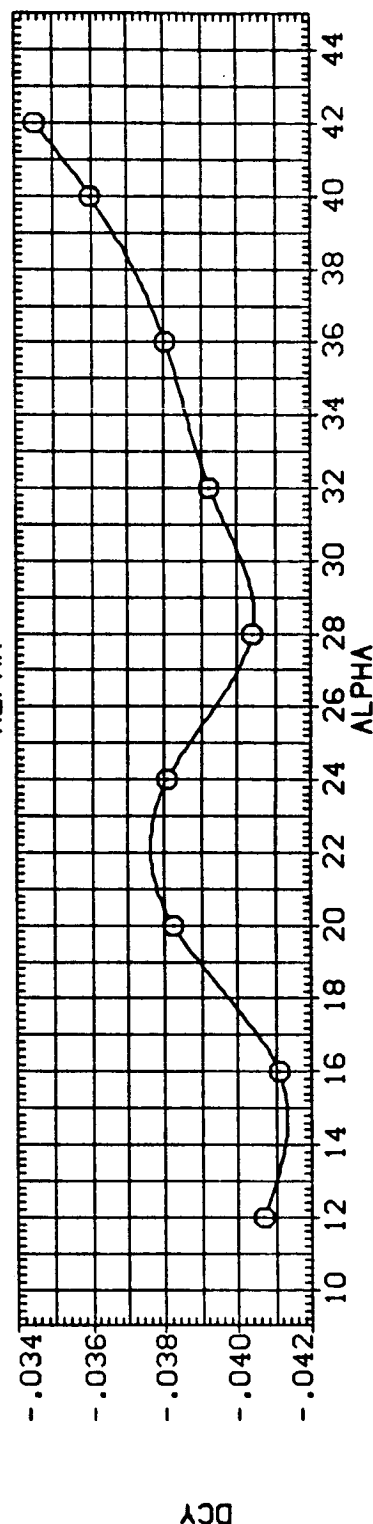
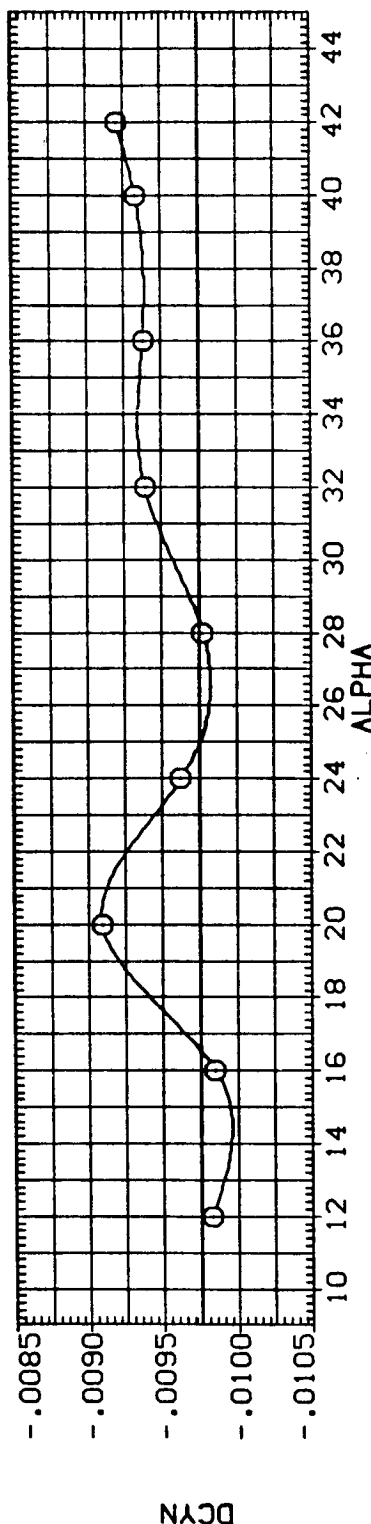
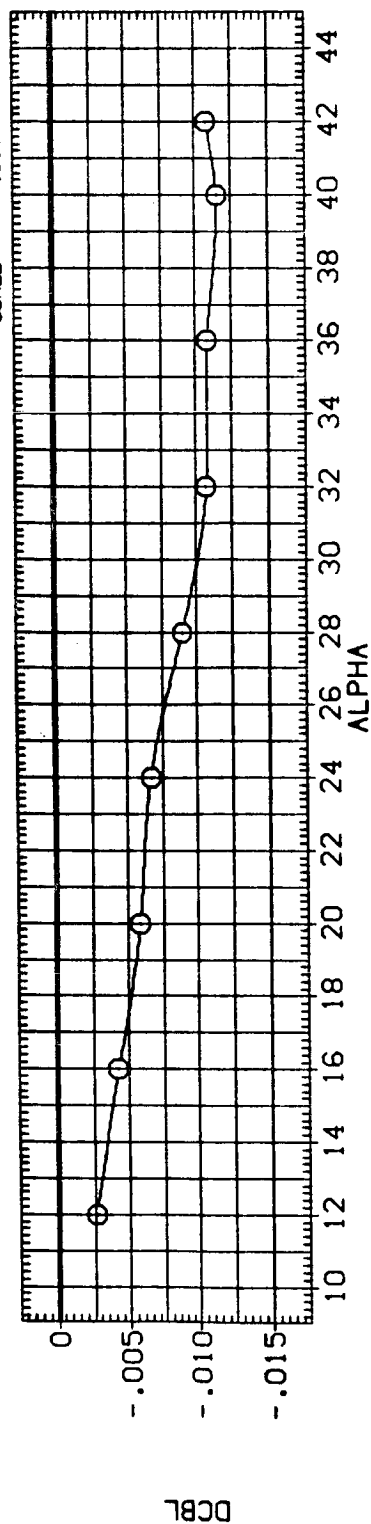


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (2E0008) ☐ AMES 3.5-190 0A98 (011-M7+M14)  
 (2E0003) ☐ AMES 3.5-190 0A98 (011-M7+M14)

BETA ELEVON BOFLAP SPOBRK  
 5.000 -40.000 -11.700 55.000  
 .000 -40.000 -11.700 55.000

REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

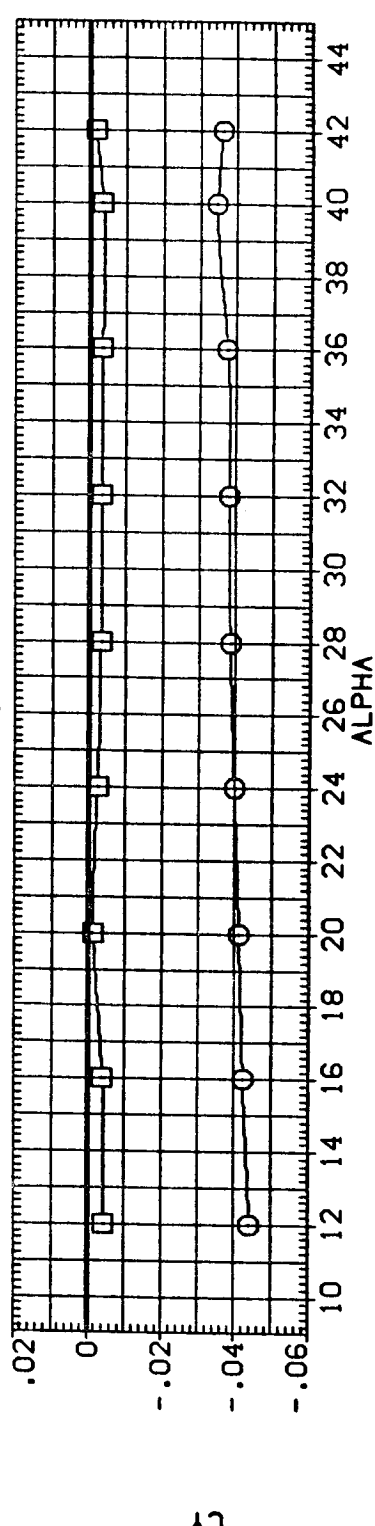
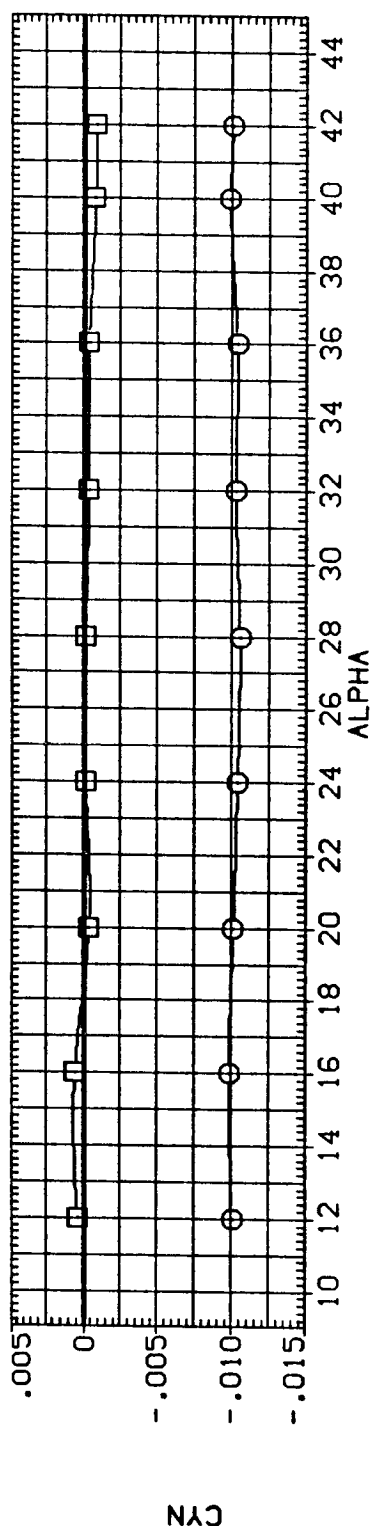
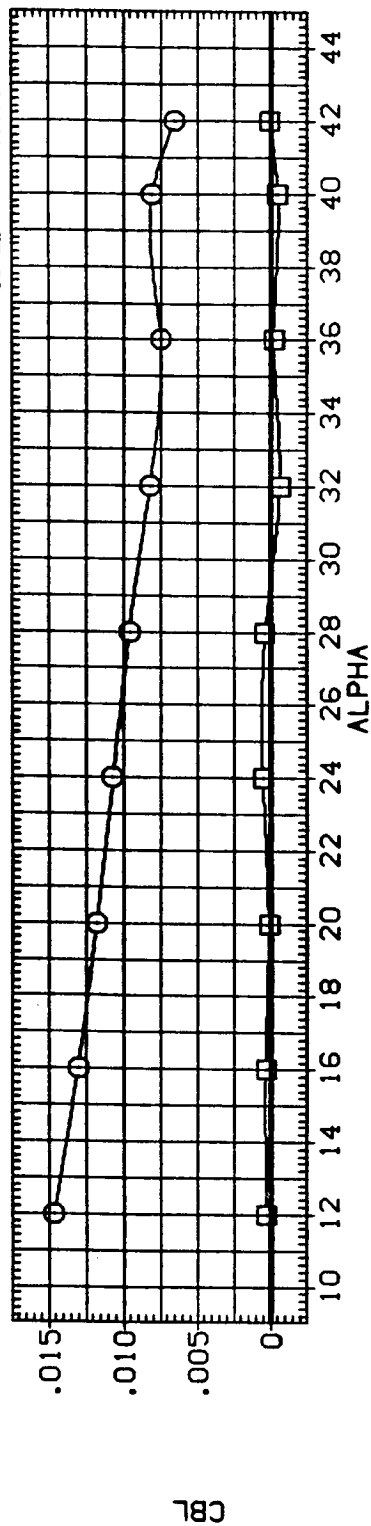


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

(A)MACH = 10.30

SYMBOL  
O

MACH  
10.300

DBETA  
BOFLAP  
RUDDER

PARAMETRIC VALUES  
5.000 ELEVON  
-11.700 SPOBRK  
.000

-40.000  
55.000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

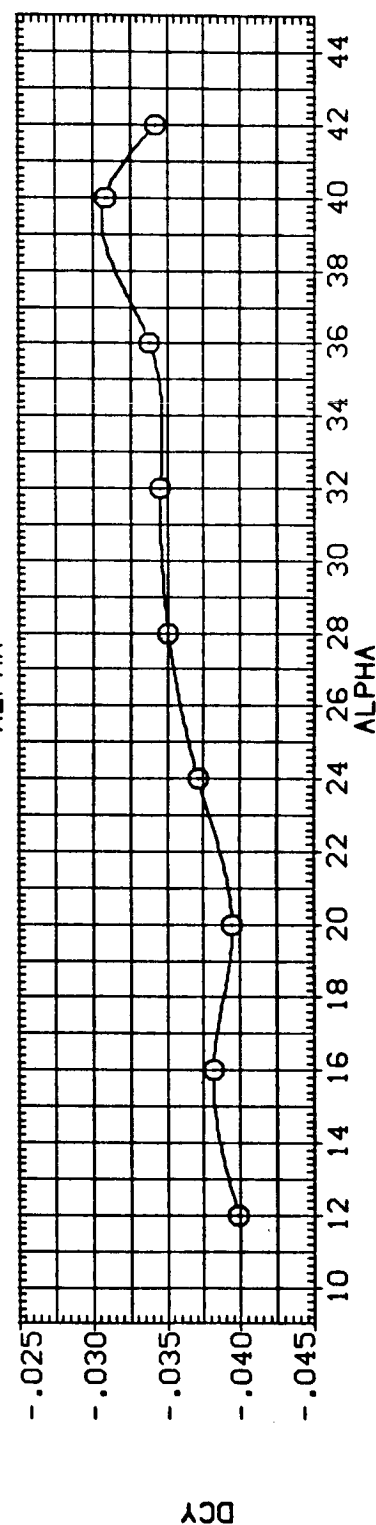
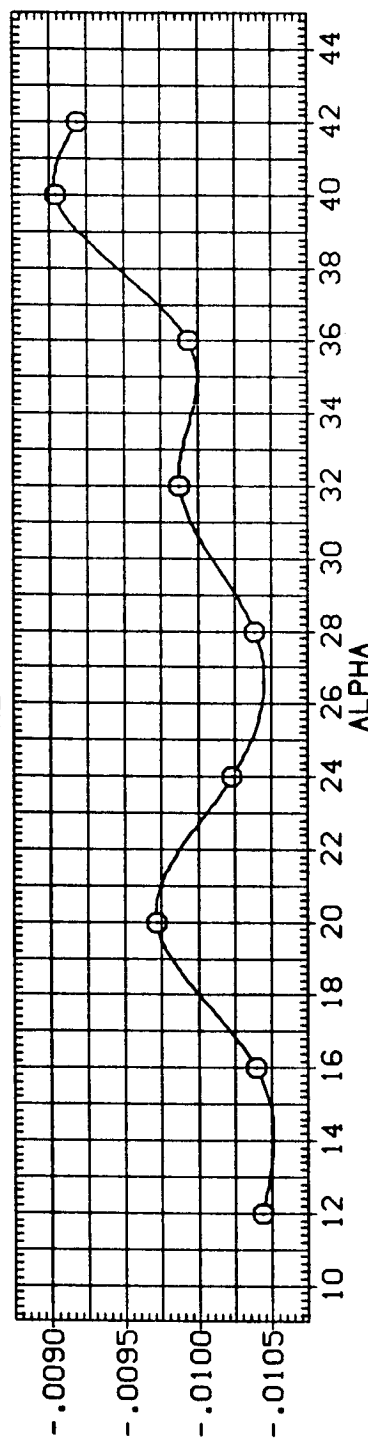
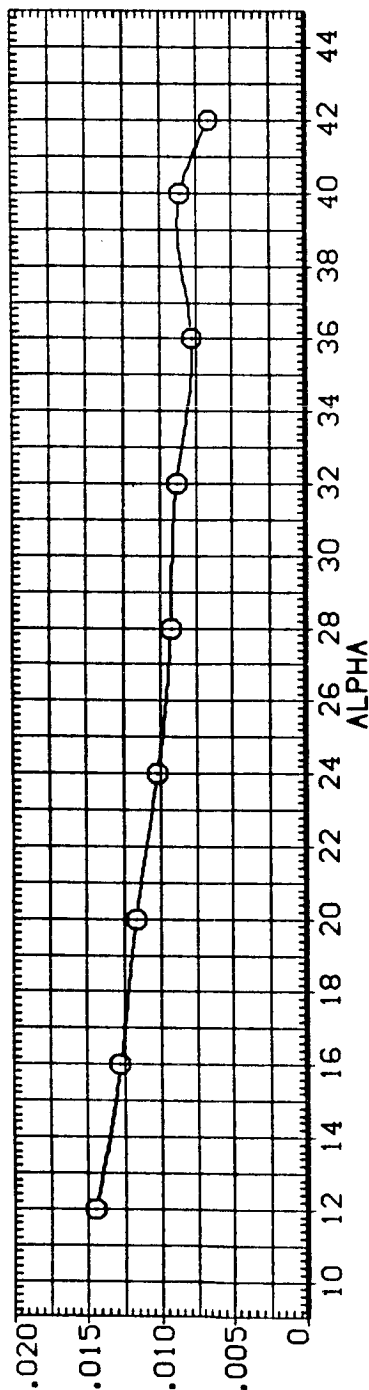




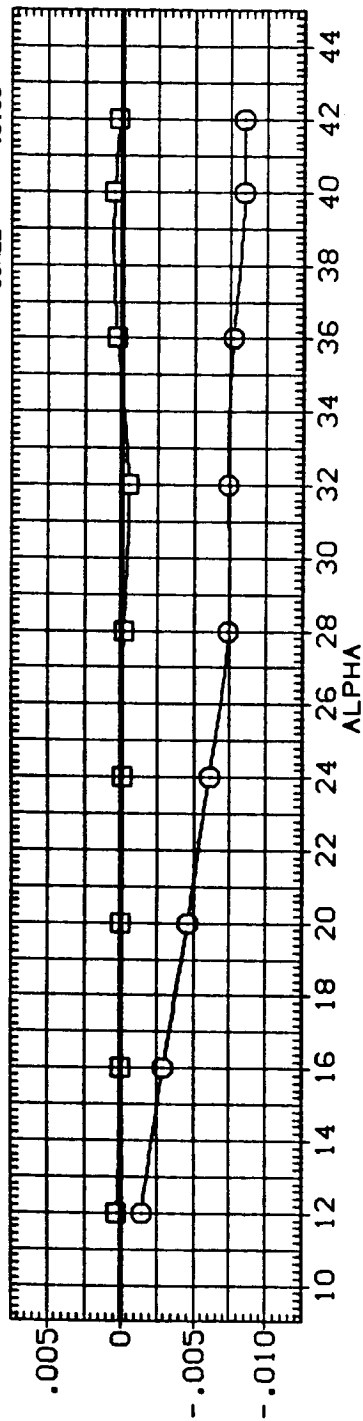
FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.



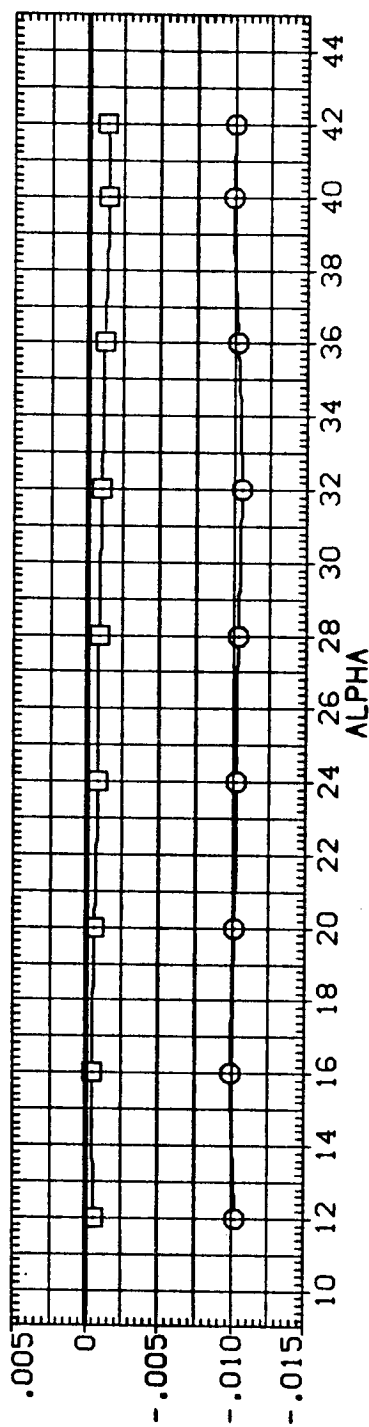
DATA SET SYMBOL CONFIGURATION DESCRIPTION  
 (2E0012)  ANES 3.5-190 0A98 (011-H7-H14-N24)  
 (2E0011)  ANES 3.5-190 0A98 (011-H7-H14-N24)

BETA ELEVON BOFLAP SPOBRK  
 5.000 -40.000 -11.700 55.000  
 .000 -40.000 -11.700 55.000

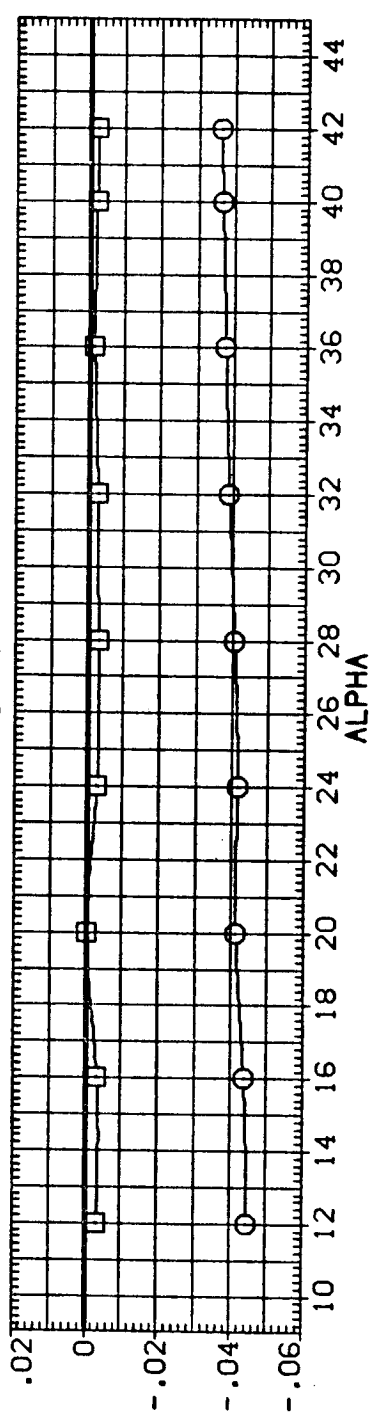
REFERENCE INFORMATION  
 SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150



CBL



CYN



CY

FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

(A)MACH = 10.30

SYMBOL MACH  
O 10.300

PARAMETRIC VALUES  
DBETA 5.000 ELEVON -40.000  
BOFLAP -11.700 SPOBRK 55.000  
RUDDER .000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

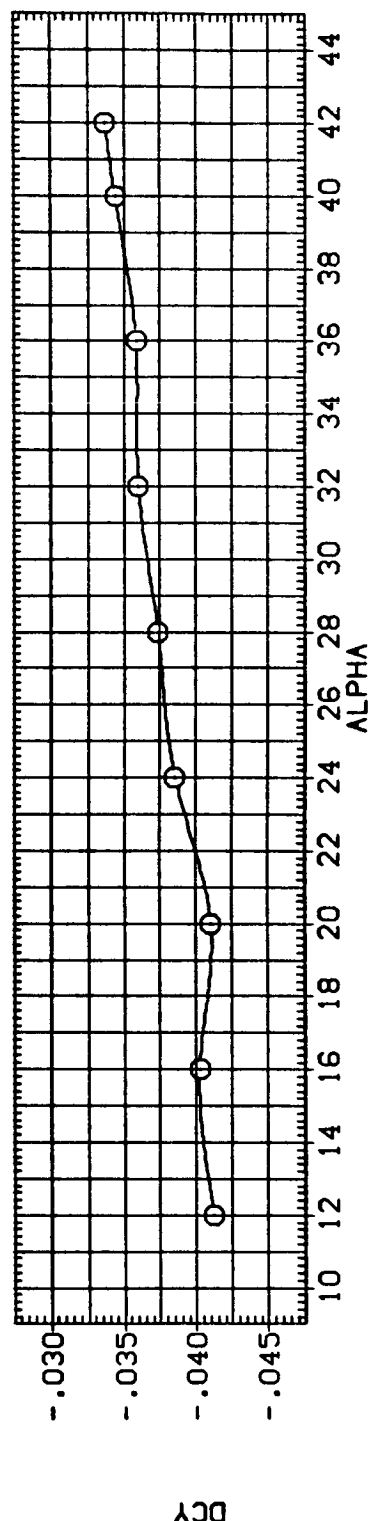
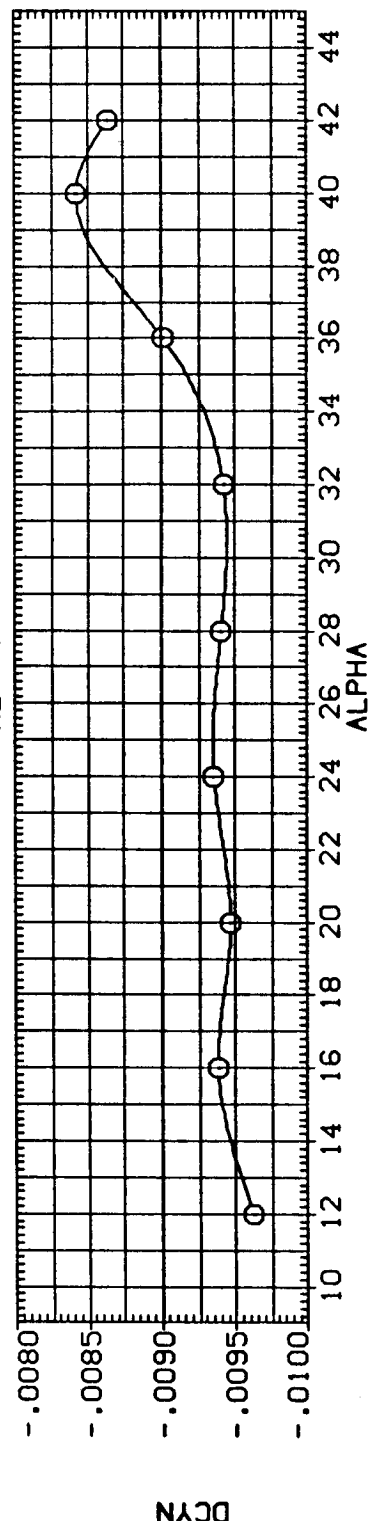
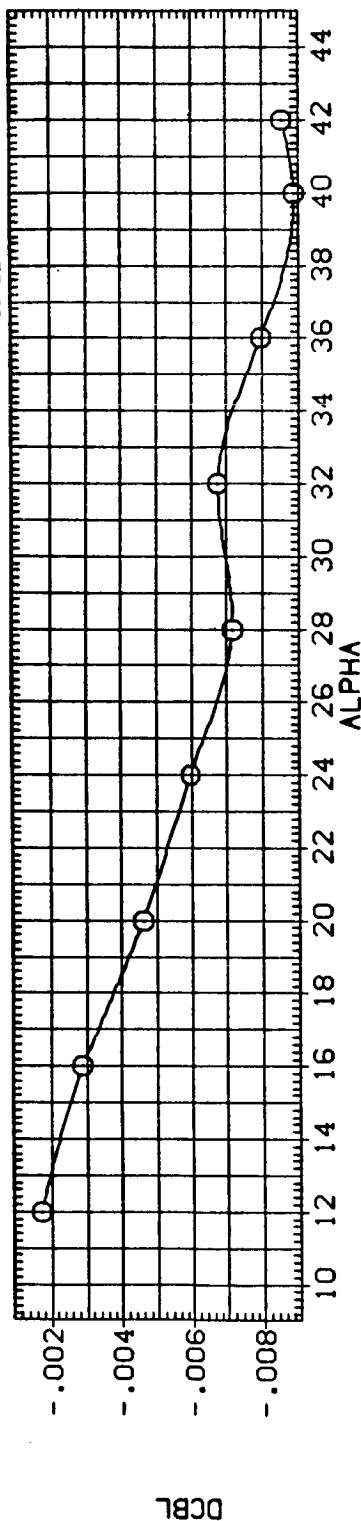


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVON	BOFLAP	SPOBRK	REFERENCE INFORMATION	
(2EQ024)	APES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	5.000	-40.000	-11.700	55.000	SREF	2690.0000 SQ.FT.
(2EQ019)	APES 3.5-190 0A98 (011-M7+H14-N24+DUMMY STING)	.000	-40.000	-11.700	55.000	LREF	474.8000 IN.
						BREF	936.6800 IN.
						XMRP	1076.7000 IN.X0
						YMRP	375.0000 IN.Y0
						ZMRP	IN.Z0
						SCALE	.0150

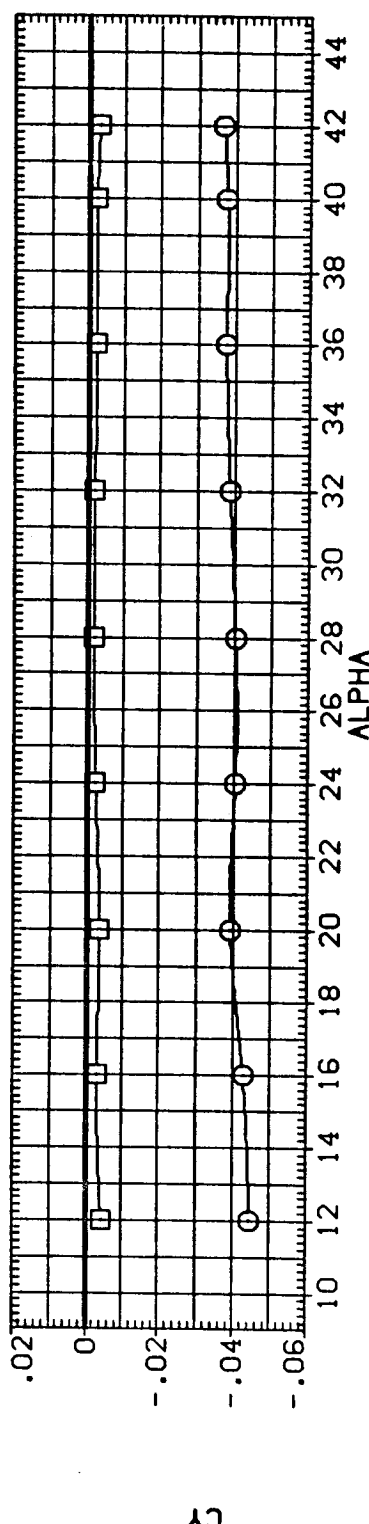
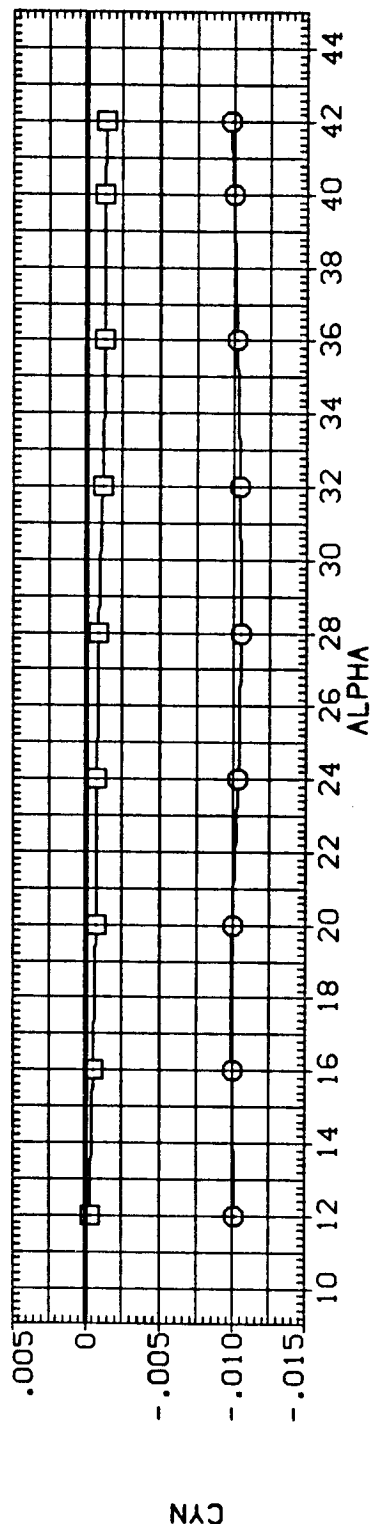
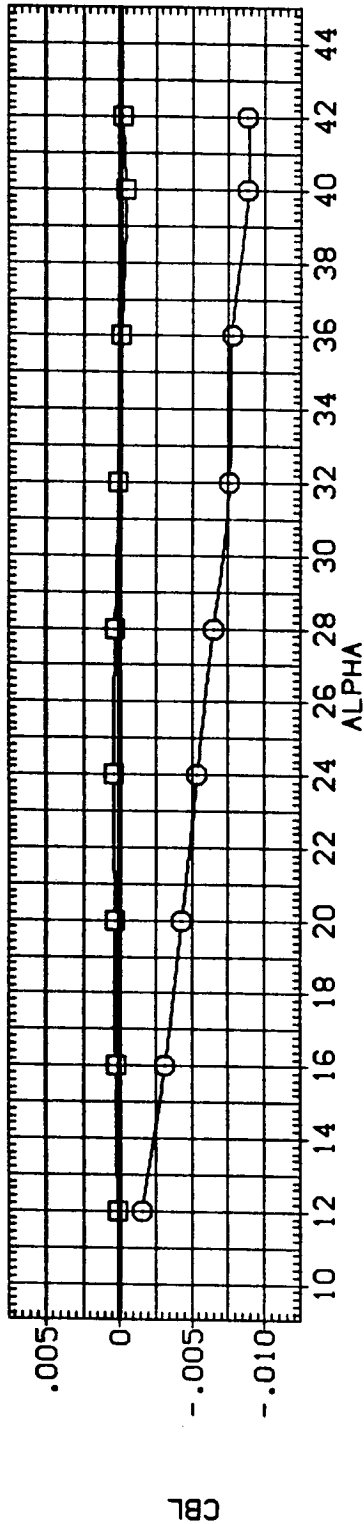


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

(A)MACH = 10.30

SYMBOL MACH  
O 10.300

PARAMETRIC VALUES  
DBETA 5.000 ELEVON -40.000  
BOFLAP -11.700 SPOBRK 55.000  
RUDDER .000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

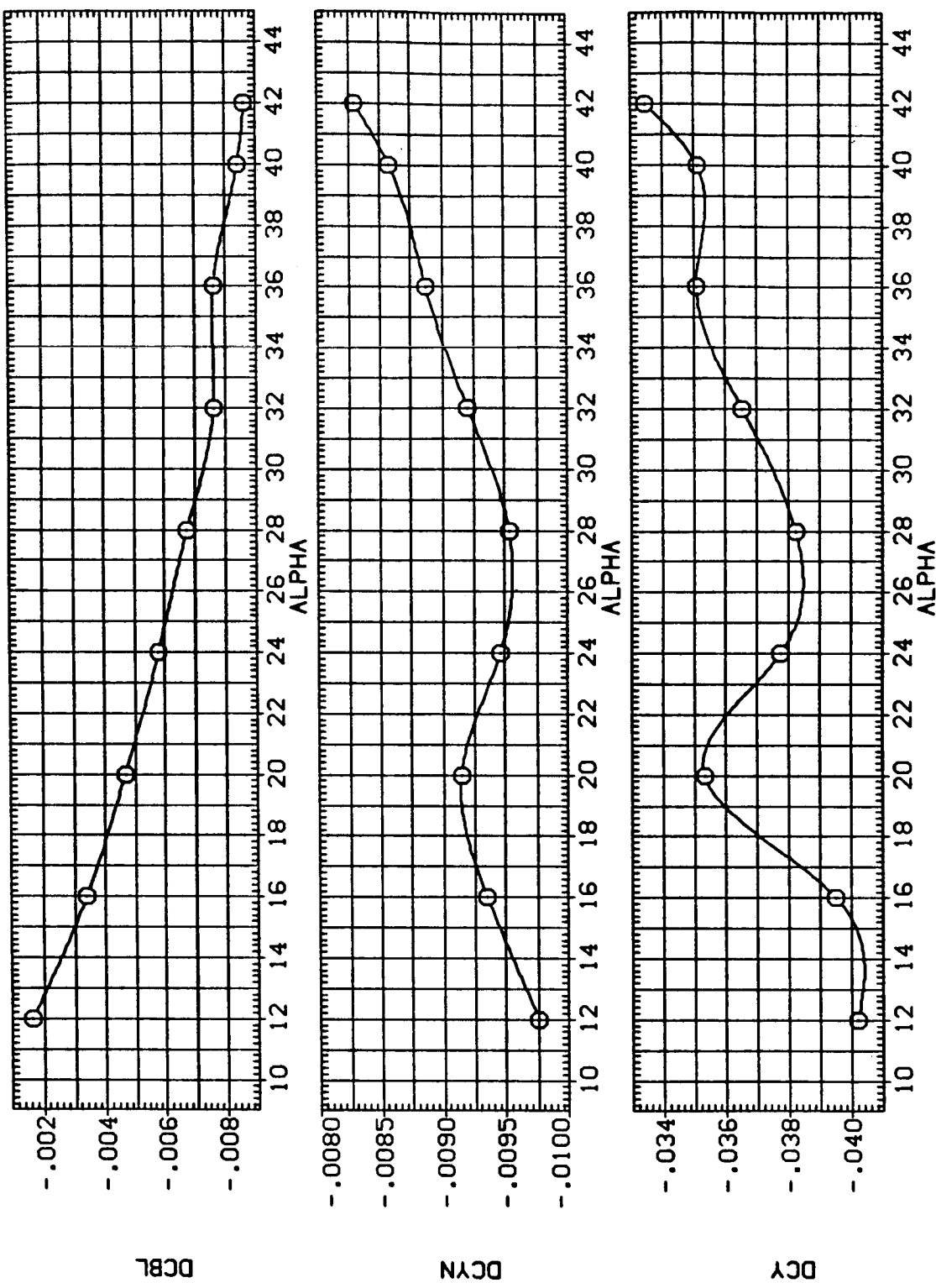


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(2E0023) ☐ AVES 3.5-190 0A98 (011-H7-H14-N24-DUMMY STING)  
 (2E0017) ☐ AVES 3.5-190 0A98 (011-H7-H14-N24-DUMMY STING)

BETA

5.000  
 .000

ELEVON

.000  
 .000

BOFLAP

-11.700  
 -11.700

SPDRBK

55.000  
 55.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.  
 LREF 474.8000 IN.  
 BREF 936.6800 IN.  
 XMRP 1076.7000 IN.X0  
 YMRP .0000 IN.Y0  
 ZMRP 375.0000 IN.Z0  
 SCALE .0150

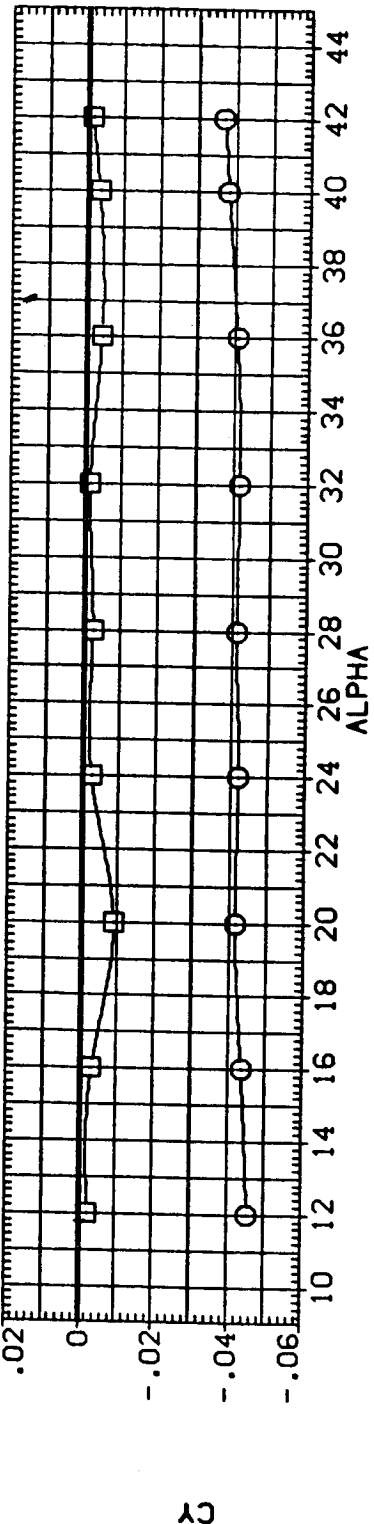
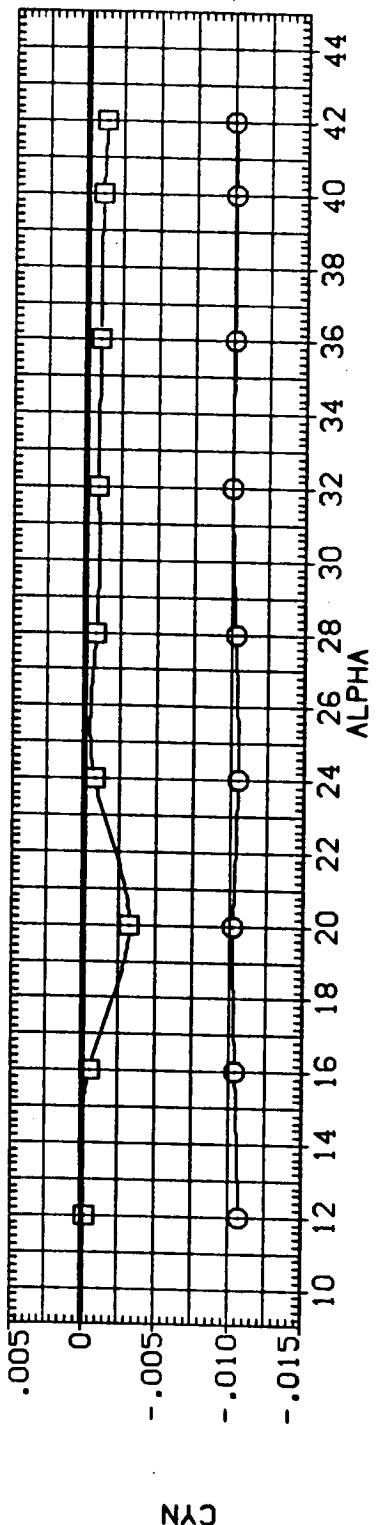
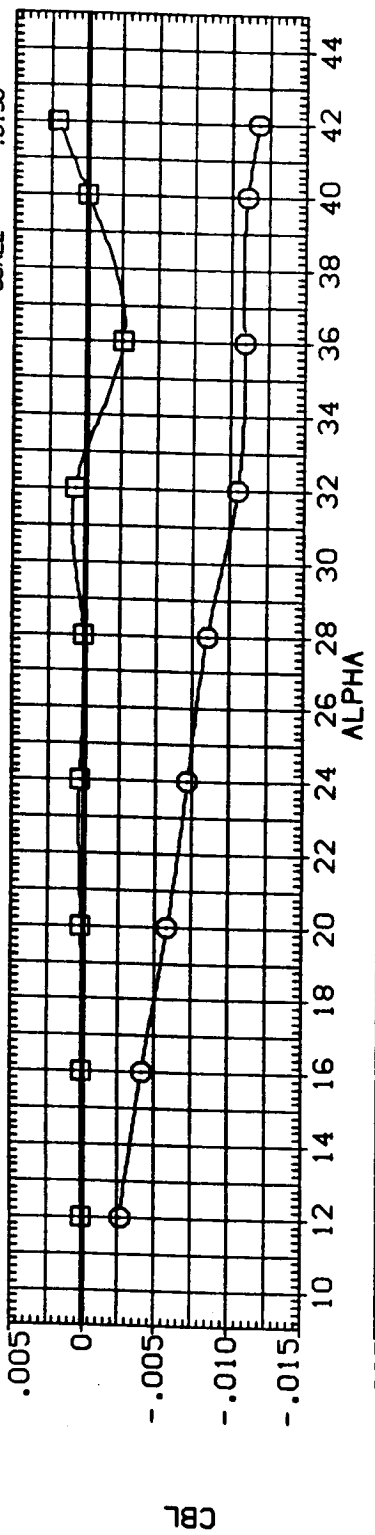


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

(A)MACH = 10.30

SYMBOL MACH 10.300  
O

PARAMETRIC VALUES  
DBETA 5.000 ELEVON .000  
BDFLAP -11.700 SPOBRK 55.000  
RUDDER .000

REFERENCE INFORMATION  
SREF 2690.0000 SQ.FT.  
LREF 474.8000 IN.  
BREF 936.6800 IN.  
XMRP 1076.7000 IN.X0  
YMRP .0000 IN.Y0  
ZMRP 375.0000 IN.Z0  
SCALE .0150

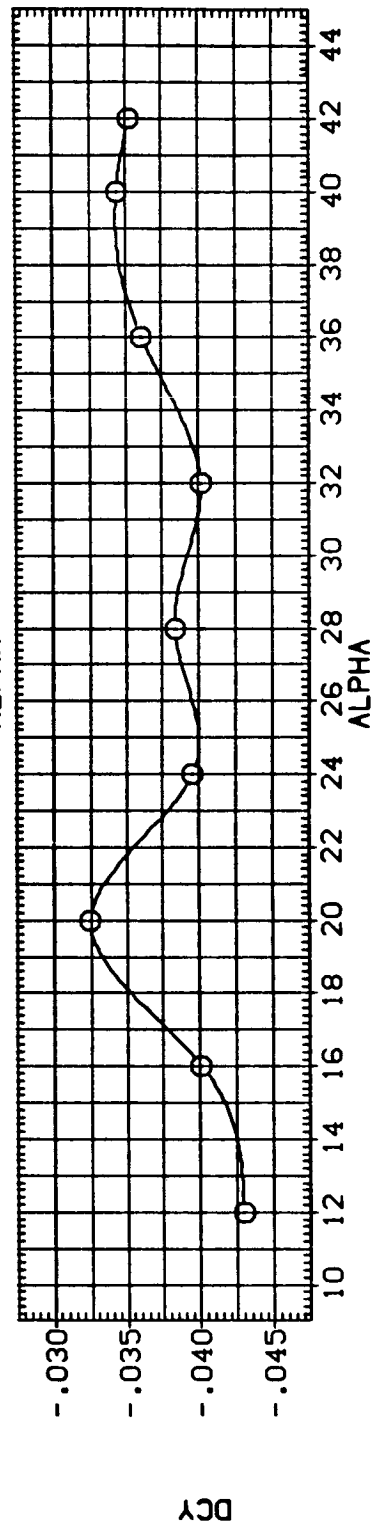
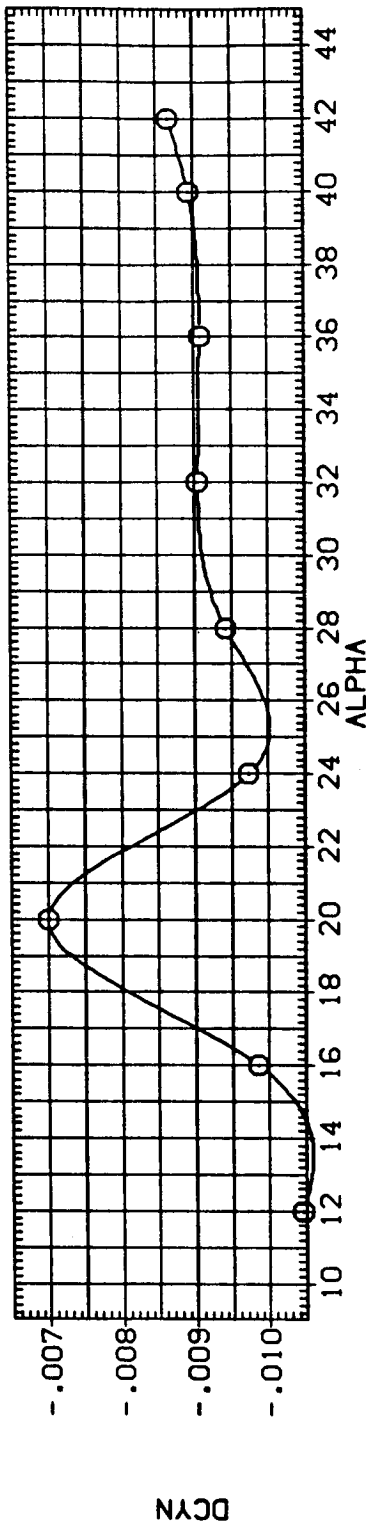
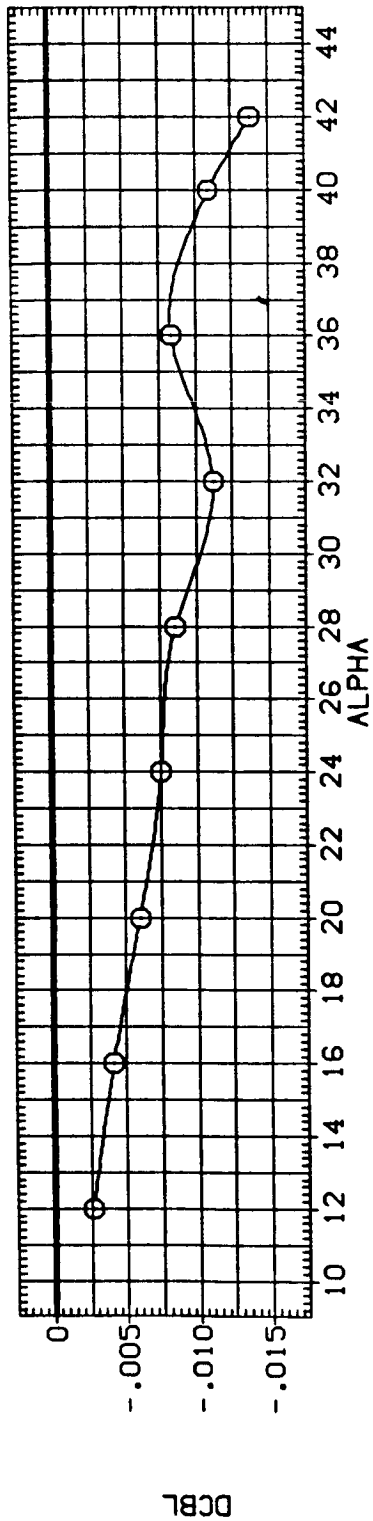


FIG. 9 STING AND NOZZLE TARES, LATERAL-DIRECTIONAL.

APPENDIX  
TABULATED SOURCE DATA

Tabulations of plotted data are available on request from  
Data Management Services

## OASB TABULATED SOURCE DATA

AMES 3.5-180 OASB (011-M7-M14)

(REQ001) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 1/ 0 RN/L = 1.71

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	12.012	.20428	-.00338	.05780	-.01859	-.00068	.00014	.18776	.09905
5.250	16.062	.31768	-.00332	.05728	-.01569	-.00080	.00013	.28943	.14293
5.250	20.112	.44480	-.00380	.05773	-.01574	-.00094	.00002	.39783	.20716
5.250	24.439	.59723	-.00424	.05902	-.01816	-.00118	.00008	.51930	.30082
5.250	28.446	.75218	-.00441	.06090	-.02214	-.00121	-.00015	.63236	.41183
5.250	32.500	.92109	-.00435	.06131	-.02832	-.00148	-.00018	.74390	.54661
5.250	36.706	1.09882	-.00432	.06023	-.03666	-.00170	-.00030	.84493	.70506
5.250	40.857	1.27903	-.00393	.05856	-.04811	-.00185	-.00026	.92908	.88100
5.250	42.803	1.36614	-.00400	.05655	-.05459	-.00196	-.00031	.96390	.96976

RUN NO. 25/ 0 RN/L = 1.50

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.731	.16560	-.00267	.05294	-.00736	-.00046	.00017	.14987	.08814
10.270	16.597	.26897	-.00228	.05333	-.00271	-.00034	.00016	.24254	.12793
10.270	20.395	.38004	-.00232	.05505	.00095	-.00049	.00021	.33704	.18404
10.270	24.562	.52612	-.00253	.05699	.00107	-.00056	-.00037	.45482	.27053
10.270	28.419	.67365	-.00076	.05876	-.00320	-.00063	.00046	.56450	.37228
10.270	32.271	.83147	-.00071	.05992	-.00511	-.00099	.00099	.67104	.49461
10.270	36.234	.99843	-.00150	.06023	-.01358	-.00098	.00005	.76974	.63874
10.270	40.188	1.17185	-.00189	.05941	-.02789	-.00101	-.00006	.85687	.80157
10.270	42.028	1.24349	-.00217	.05826	-.03068	-.00103	-.00083	.88468	.87579

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0A98 TABULATED SOURCE DATA

PAGE 2

AMES 3.5-190 0A98 (011-M7+M14)

(AE0001) ( 03 AUG 74 )

REFERENCE DATA

SREF = 2690.0000 SQ.FT.  
LREF = 474.8000 IN.  
BREF = 936.6800 IN.  
SCALE = .0150

XMRP = 1076.7000 IN.XO  
YMRP = .0000 IN.YO  
ZMRP = 375.0000 IN.ZO

PARAMETRIC DATA

BETA = .000 ELEVON = .000  
BOFLAP = -11.700 SPDBRK = 55.000  
RUDDER = .000

RUN NO. 1/ 0 RN/L = 1.71

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	12.012	-.03419	-.04299	-.04171	-.04260	.01371	-.00352	-.03376	-.02780	-.03818
5.250	16.062	-.03681	-.04399	-.04286	-.04440	-.00534	-.00455	-.03711	-.02939	-.04050
5.250	20.112	-.03751	-.04375	-.04332	-.04497	-.02444	-.00554	-.03671	-.02965	-.03792
5.250	24.439	-.03649	-.04218	-.04191	-.04363	-.02678	-.00646	-.03653	-.03020	-.03671
5.250	28.446	-.03554	-.04169	-.04070	-.04324	-.02500	-.00775	-.03678	-.03078	-.03615
5.250	32.500	-.03555	-.04114	-.04041	-.04265	-.02194	-.00890	-.03688	-.03034	-.03427
5.250	36.706	-.03332	-.03819	-.03769	-.04003	-.02648	-.01046	-.03590	-.02842	-.03054
5.250	40.857	-.03181	-.03691	-.03657	-.03909	-.02991	-.01191	-.03665	-.02711	-.02754
5.250	42.803	-.03023	-.03534	-.03505	-.03767	-.03109	-.01319	-.03588	-.02806	-.02583

RUN NO. 25/ 0 RN/L = 1.50

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.731	-.00442	-.01185	-.01061	-.01280	-.00409	-.01731	-.00682	-.00328	-.00777
10.270	16.597	-.00531	-.01185	-.01067	-.01280	-.00692	-.01759	-.00783	-.00398	-.00771
10.270	20.395	-.00571	-.01111	-.01011	-.01272	-.00701	-.01756	-.00778	-.00299	-.00723
10.270	24.562	-.00493	-.01014	-.00921	-.01178	-.00513	-.01667	-.00727	-.00268	-.00646
10.270	28.419	-.00385	-.00844	-.00768	-.01024	-.00256	-.01590	-.00705	-.00230	-.00556
10.270	32.271	-.00228	-.00672	-.00711	-.01015	-.00054	-.01463	-.00637	-.00047	-.00298
10.270	36.234	-.00257	-.00575	-.00592	-.00921	.00517	-.01322	-.00497	.00197	-.00069
10.270	40.188	.00106	-.00341	-.00344	-.00698	.00517	-.00927	-.00228	.00354	.00216
10.270	42.028	.00399	-.00068	-.00089	-.00493	-.00323	-.00697	-.00200	.00460	.00438

ORIGINAL PAGE IS  
OF POOR QUALITY

0A98 TABULATED SOURCE DATA

(REQ002) ( 03 AUG 74 )

AMES 3.5-190 0A98 (011-M7+M14)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XHRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YHRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZHRP = 375.0000 IN.ZO  
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = -10.000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 2/ 0 RV/L = 1.79

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.900	.18926	-.00413	.05981	-.00771	-.00053	.00019	.17286	.09755
5.250	15.980	.30079	-.00421	.05893	-.00389	-.00077	.00018	.27294	.13946
5.250	19.998	.42479	-.00452	.05933	-.00089	-.00089	.00011	.37889	.20102
5.250	24.360	.57472	-.00532	.06052	.00137	-.00100	-.00007	.49859	.29219
5.250	28.449	.72711	-.00528	.06067	.00215	-.00115	-.00005	.61040	.39972
5.250	32.463	.88783	-.00551	.06008	.00040	-.00159	-.00002	.71685	.52724
5.250	36.657	1.06048	-.00530	.05811	-.00333	-.00176	-.00012	.81605	.67974
5.250	40.820	1.23314	-.00514	.05511	-.00965	-.00187	-.00018	.89716	.84780
5.250	42.771	1.31578	-.00516	.05314	-.01365	-.00187	-.00028	.92979	.93252

RUN NO. 24/ 0 RV/L = 1.57

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.705	.15710	-.00298	.05253	-.00165	-.00046	.00018	.14170	.08579
10.270	16.589	.25807	-.00281	.05358	.00691	-.00036	-.00001	.23204	.12503
10.270	20.372	.36740	-.00306	.05474	.01218	-.00044	-.00013	.32537	.17922
10.270	24.565	.50696	-.00249	.05644	.01648	-.00065	.00038	.43761	.26208
10.270	28.387	.65516	-.00143	.05849	.02029	-.00077	.00052	.54857	.36294
10.270	32.209	.79029	-.00195	.05764	.01649	-.00074	-.00045	.63795	.47000
10.270	36.184	.95620	-.00155	.05710	.01434	-.00101	.00041	.73807	.61061
10.270	40.080	1.12278	-.00284	.05586	.00803	-.00097	-.00146	.82312	.76565
10.270	41.914	1.20548	-.00279	.05468	.00546	-.00105	-.00108	.88055	.84597

ORIGINAL PAGE IS  
 OF POOR QUALITY

AMES 3.5-190 0A98 (011-M7-M14)

(AEQ002) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

BETA = .000 ELEVON = -10.000  
 BDELAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

## PARAMETRIC DATA

RUN NO. 2/ 0 RN/L = 1.79

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.900	-.03585	-.04212	-.04069	-.04026	.01563	.01026	-.03210	-.02383	-.03581
5.250	15.980	-.03895	-.04360	-.04232	-.04239	-.00587	.00995	-.03585	-.02562	-.03832
5.250	19.998	-.03883	-.04291	-.04186	-.04258	-.02053	.00852	-.03403	-.02582	-.03637
5.250	24.360	-.03766	-.04012	-.03984	-.04091	-.02720	.00709	-.03435	-.02665	-.03420
5.250	28.449	-.03749	-.04002	-.03925	-.04071	-.02340	.00523	-.03504	-.02683	-.03404
5.250	32.463	-.03788	-.03985	-.03957	-.04091	-.02048	.00399	-.03571	-.02716	-.03341
5.250	36.657	-.03577	-.03772	-.03721	-.03901	-.02474	.00272	-.03519	-.02514	-.02893
5.250	40.820	-.03405	-.03534	-.03504	-.03736	-.02851	.00019	-.03473	-.02395	-.02582
5.250	42.771	-.03178	-.03298	-.03307	-.03561	-.02917	-.00083	-.03334	-.02510	-.02363

RUN NO. 24/ 0 RN/L = 1.57

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.705	.00268	-.00623	-.00319	-.00398	.00787	-.00499	.00086	.00342	-.00082
10.270	16.588	.00307	-.00508	-.00325	-.00415	.00291	-.00576	.00001	.00335	-.00084
10.270	20.372	.00229	-.00594	-.00313	-.00423	.00275	-.00576	-.00037	.00336	-.00085
10.270	24.565	.00211	-.00462	-.00205	-.00371	.00447	-.00537	-.00003	.00437	.00041
10.270	28.387	.00250	-.00418	-.00126	-.00303	.00567	-.00499	.00003	.00500	.00104
10.270	32.209	.00289	-.00153	-.00001	-.00174	.01133	-.00332	.00103	.00582	.00320
10.270	36.184	.00417	-.00044	.00135	-.00131	.01665	-.00204	.00233	.00915	.00633
10.270	40.080	.00573	.00127	.00305	.00083	.01870	.00051	.00401	.01115	.00932
10.270	41.914	.00680	.00275	.00474	.00082	.01046	.00191	.00428	.01176	.01119

ORIGINAL PAGE IS  
OF POOR QUALITY

0A98 TABULATED SOURCE DATA

AMES 3.5-180 0A98 (011-M7-M14)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.X0  
LREF = 474.8000 IN. YMRP = .0000 IN.Y0  
BREF = 936.6800 IN. ZMRP = 375.0000 IN.Z0  
SCALE = .0150

BETA = .000 ELEVON = -40.000  
BDFLAP = -11.700 SPOBRK = 55.000  
RUDDER = .000

PARAMETRIC DATA

RUN NO. 3/ 0 RN/L = 1.85

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.988	.16942	-.00392	.07106	.00660	-.00052	.00043	.15097	.10470
5.250	16.045	.28285	-.00398	.06719	.01008	-.00069	.00039	.25327	.14275
5.250	20.005	.40335	-.00425	.06552	.01390	-.00086	.00021	.35659	.19955
5.250	24.423	.54944	-.00445	.06513	.01923	-.00111	.00022	.47335	.28649
5.250	28.345	.69239	-.00453	.06592	.02327	-.00134	.00017	.57808	.38675
5.250	32.501	.85133	-.00490	.06814	.02521	-.00166	.00022	.68139	.51490
5.250	36.708	1.01717	-.00539	.06623	.02760	-.00200	.00024	.77586	.66110
5.250	40.846	1.18152	-.00511	.06366	.02807	-.00199	.00016	.85215	.82090
5.250	42.815	1.25930	-.00535	.06319	.02761	-.00210	.00009	.88083	.90221

RUN NO. 23/ 0 RN/L = 1.47

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.701	.14433	-.00430	.05747	.00793	.00047	.00024	.12816	.08780
10.270	16.537	.24333	-.00386	.05689	.01574	.00048	.00028	.21707	.12380
10.270	20.372	.35461	-.00534	.05799	.02258	.00032	-.00022	.31224	.17781
10.270	24.464	.49074	-.00278	.06022	.03042	-.00009	.00053	.42174	.25804
10.270	28.407	.63011	-.00336	.06249	.03416	-.00018	.00023	.52451	.35473
10.270	32.181	.77107	-.00345	.06413	.03723	-.00038	-.00065	.61845	.46494
10.270	36.155	.93051	-.00367	.06551	.04353	-.00040	-.00025	.71266	.60187
10.270	40.102	1.08928	-.00357	.06579	.04335	-.00084	-.00049	.79082	.75198
10.270	41.882	1.15969	-.00195	.06474	.04087	-.00088	-.00001	.82019	.82241

ORIGINAL PAGE IS  
OF POOR QUALITY

## OASB TABULATED SOURCE DATA

(AEQ003) ( 03 AUG 74 )

AMES 3.5-190 OASB (011-M7-M14)

## PARAMETRIC DATA

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

BETA = .000 ELEVON = -40.000  
 BOFLAP = -11.700 SPDBRK = 55.000  
 RUDDER = .000

RUN NO. 3/ 0 RN/L = 1.85

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.988	-.03843	-.04327	-.04206	-.04253	.01505	.00749	-.03410	-.03056	-.03927
5.250	16.045	-.04177	-.04450	-.04356	-.04419	-.00543	.00658	-.03867	-.03230	-.04132
5.250	20.005	-.04189	-.04419	-.04367	-.04429	-.02288	.00576	-.03735	-.03284	-.03979
5.250	24.423	-.04133	-.04291	-.04251	-.04302	-.02713	.00518	-.03778	-.03379	-.03947
5.250	28.345	-.04121	-.04343	-.04256	-.04355	-.02406	.00434	-.03857	-.03333	-.03840
5.250	32.501	-.04022	-.04269	-.04110	-.04229	-.02122	.00349	-.03829	-.03227	-.03482
5.250	36.708	-.03766	-.04042	-.03821	-.03946	-.02607	.00242	-.03728	-.02905	-.03057
5.250	40.846	-.03520	-.03834	-.03628	-.03711	-.03029	.00105	-.03651	-.02826	-.02764
5.250	42.815	-.03204	-.03520	-.03334	-.03429	-.03015	.00040	-.03423	-.02616	-.02466

RUN NO. 23/ 0 RN/L = 1.47

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.701	.00624	-.00484	-.00088	.00149	.01007	-.00121	.00213	.00474	.00094
10.270	16.537	.00567	-.00494	-.00120	.00090	.00606	-.00235	.00153	.00439	.00103
10.270	20.372	.00509	-.00460	-.00086	.00074	.00496	-.00234	.00125	.00471	.00103
10.270	24.464	.00526	-.00318	.00037	.00174	.00655	-.00121	.00201	.00612	.00256
10.270	28.407	.00555	-.00227	.00167	.00311	.00861	-.00121	.00201	.00643	.00330
10.270	32.181	.00674	.00020	.00344	.00501	.01240	-.00056	.00343	.00852	.00638
10.270	36.155	.00674	.00169	.00413	.00502	.01696	.00124	.00405	.01035	.00785
10.270	40.102	.00891	.00325	.00583	.00571	.01971	.00278	.00506	.01180	.01057
10.270	41.882	.00975	.00453	.00693	.00576	.01297	.00646	.00570	.01175	.01171

ORIGINAL PAGE IS  
OF POOR QUALITY

0A98 TABULATED SOURCE DATA

AMES 3.5-190 0A98 (011-M7+M14) (REQ004) ( 03 AUG 74 )

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 4/ 0 RN/L = 1.57

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.987	.20411	-.00403	.06064	-.01626	-.00064	.00012	.18706	.10171
5.250	16.034	.32047	-.00369	.06033	-.01501	-.00079	.00006	.29134	.14650
5.250	20.033	.44844	-.00396	.06035	-.01461	-.00094	.00006	.40064	.21032
5.250	24.358	.60182	-.00472	.06056	-.01561	-.00101	.00004	.52327	.30338
5.250	28.462	.78158	-.00466	.06077	-.01901	-.00127	.00004	.64057	.41638
5.250	32.381	.92678	-.00471	.06118	-.02572	-.00150	.00004	.74990	.54801
5.250	36.694	1.11269	-.00446	.06103	-.03519	-.00161	-.00001	.85573	.71381
5.250	40.857	1.29394	-.00443	.05918	-.04657	-.00175	-.00001	.93995	.89122
5.250	42.821	1.37799	-.00425	.05873	-.05218	-.00191	.00002	.97081	.97970

PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BOFLAP = -11.700 SPDBRK = 85.000  
 RUDDER = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 4/ 0 RN/L = 1.57

MACH	ALPHA	CP81	CP82	CP83	CP84	CP85	CP86	CP87	CP88	CP89	CP90	CP91
5.250	11.987	-.03205	-.03984	-.03910	-.03752	.01842	.00867	-.02996	-.02338	-.02338	-.02338	-.03460
5.250	16.034	-.03659	-.04179	-.04112	-.04002	-.00150	.00734	-.03509	-.02526	-.02526	-.02526	-.03525
5.250	20.033	-.03783	-.04211	-.04177	-.04110	-.01837	.00707	-.03576	-.02630	-.02630	-.02630	-.03426
5.250	24.358	-.03647	-.03985	-.03986	-.03952	-.02452	.00595	-.03381	-.02723	-.02723	-.02723	-.03434
5.250	28.462	-.03590	-.03985	-.03910	-.03897	-.02225	.00492	-.03389	-.02786	-.02786	-.02786	-.03480
5.250	32.381	-.03623	-.03886	-.03842	-.03837	-.01743	.00326	-.03487	-.02766	-.02766	-.02766	-.03316
5.250	36.694	-.03368	-.03652	-.03621	-.03629	-.02182	.00201	-.03380	-.02559	-.02559	-.02559	-.02992
5.250	40.857	-.03199	-.03447	-.03430	-.03477	-.02486	-.00008	-.03316	-.02409	-.02409	-.02409	-.02679
5.250	42.821	-.03012	-.03239	-.03261	-.03308	-.02544	-.00152	-.03165	-.02421	-.02421	-.02421	-.02463

PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BOFLAP = -11.700 SPDBRK = 85.000  
 RUDDER = .000

ORIGINAL PAGE IS  
 OF POOR QUALITY

AMES 3.5-190 0A98 (011-M7-M14)

(REQ005) ( 03 AUG 74 )

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 27/ 0 RN/L = 1.56

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.634	.17204	-.00373	.05411	-.01556	-.00021	-.00017	.15604	.09043
10.270	16.538	.28273	-.00328	.05660	-.01608	-.00009	-.00055	.25492	.13474
10.270	20.374	.40955	-.00280	.05979	-.02529	-.00021	-.00048	.36311	.19864
10.270	24.494	.56383	-.00336	.06456	-.03588	-.00035	-.00039	.46632	.29252
10.270	28.468	.72128	-.00244	.06870	-.04481	-.00056	.00007	.60131	.40421
10.270	32.254	.87426	-.00245	.07134	-.05832	-.00066	-.00138	.70128	.52691
10.270	36.238	1.05989	-.00332	.07489	-.07253	-.00080	-.00136	.81059	.68695
10.270	40.194	1.23741	-.00232	.07682	-.09425	-.00090	-.00086	.89602	.85681
10.270	42.025	1.32342	-.00177	.07663	-.09823	-.00105	-.00034	.93181	.94289

PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BDFLAP = 16.300 SPOBRK = 55.000  
 RUDDER = .000

AMES 3.5-190 0A98 (011-M7-M14)

(AEQ005) ( 03 AUG 74 )

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 27/ 0 RN/L = 1.56

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.634	.00287	-.00716	-.00549	-.00724	.00272	-.01103	-.00044	.00325	-.00141
10.270	16.538	.00181	-.00629	-.00554	-.00750	-.00233	-.01141	-.00166	.00326	-.00113
10.270	20.374	.00133	-.00629	-.00531	-.00766	-.00232	-.01179	-.00176	.00333	-.00092
10.270	24.494	.00076	-.00513	-.00490	-.00706	-.00197	-.01153	-.00170	.00403	-.00007
10.270	28.468	.00133	-.00341	-.00383	-.00604	.00139	-.01166	-.00193	.00333	.00068
10.270	32.254	.00279	-.00111	-.00274	-.00510	.00628	-.00849	-.00025	.00533	.00282
10.270	36.238	.00386	-.00042	-.00177	-.00451	.01033	-.00824	.00042	.00702	.00483
10.270	40.194	.00737	.00247	.00155	-.00168	.00843	-.00255	.00377	.00973	.00900
10.270	42.025	.01155	.00784	.00683	.00250	.00377	-.00012	.00578	.01123	.01280

PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BDFLAP = 16.300 SPOBRK = 55.000  
 RUDDER = .000

ORIGINAL PAGE IS  
 OF POOR QUALITY

Q988 TABULATED SOURCE DATA

AMES 3.5-190 Q988 (011-M7+H14)

(REQ006) ( 03 AUG 74 )

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YMRP = .0000 IN.YO  
BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
SCALE = .0150

BETA = .000 ELEVON = .000  
BDFLAP = .000 SPDBRK = 55.000  
RUDDER = .000

PARAMETRIC DATA

RUN NO. 28/ 0 RN/L = 1.54

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.730	.17452	-.00304	.05418	-.00745	-.00046	-.00003	.15830	.09129
10.270	16.632	.28317	-.00260	.05490	-.00224	-.00059	-.00010	.25561	.13365
10.270	20.433	.40183	-.00277	.05661	-.00036	-.00072	-.00001	.35679	.19333
10.270	24.530	.54691	-.00151	.05898	-.00175	-.00078	-.00033	.47307	.26072
10.270	28.432	.70659	-.00128	.06025	-.01550	-.00079	-.00003	.59267	.36940
10.270	32.234	.86672	-.00237	.06122	-.02298	-.00109	-.00015	.70049	.51407
10.270	36.267	1.04921	-.00277	.06175	-.03732	-.00125	-.00005	.80942	.67045
10.270	40.165	1.21920	-.00286	.06209	-.03980	-.00122	-.00038	.89167	.83381
10.270	42.028	1.30286	-.00326	.06086	-.05388	-.00156	-.00011	.92704	.91747

AMES 3.5-190 Q988 (011-M7+H14)

(AEQ006) ( 03 AUG 74 )

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YMRP = .0000 IN.YO  
BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
SCALE = .0150

BETA = .000 ELEVON = .000  
BDFLAP = .000 SPDBRK = 55.000  
RUDDER = .000

PARAMETRIC DATA

RUN NO. 28/ 0 RN/L = 1.54

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.730	.00319	-.00346	-.00308	-.00682	.00387	-.00956	.00029	.00311	-.00073
10.270	16.632	.00280	-.00334	-.00313	-.00725	.00054	-.01019	-.00076	.00262	-.00051
10.270	20.433	.00212	-.00306	-.00257	-.00857	.00037	-.00969	-.00088	.00311	-.00045
10.270	24.530	.00347	-.00187	-.00173	-.00615	.00275	-.00905	-.00061	.00397	.00099
10.270	28.432	.00464	-.00028	-.00043	-.00401	.00540	-.00880	.00028	.00497	.00211
10.270	32.234	.00533	.00093	.00042	-.00401	.00788	-.00778	.00074	.00654	.00398
10.270	36.267	.00690	.00229	.00208	-.00272	.01268	-.00498	.00253	.00880	.00648
10.270	40.165	.01071	.00548	.00550	.00112	.01302	-.00027	.00560	.01249	.01140
10.270	42.028	.01442	.00907	.00861	.00369	.00508	.00241	.00700	.01274	.01334

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## OAGB TABULATED SOURCE DATA

(REQ007) ( 03 AUG 74 )

AMES 3.5-190 OAGB (011-M7+M14)

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = 5.000 ELEVON = .000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 29/ 0 RN/L = 1.59

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.805	.16560	-.04355	.05412	-.00624	-.01031	-.00281	.14948	.08947
10.270	16.678	.26810	-.04296	.05512	-.00130	-.01007	-.00438	.24100	.12974
10.270	20.447	.38350	-.04266	.05710	.00205	-.01044	-.00541	.33940	.18747
10.270	24.602	.52764	-.04106	.05856	.00001	-.01032	-.00716	.45536	.27291
10.270	28.532	.67648	-.04109	.05987	-.00201	-.01033	-.00877	.56572	.37572
10.270	32.338	.83725	-.03982	.06156	-.00640	-.01037	-.00979	.67447	.49986
10.270	36.339	1.00423	-.03941	.06134	-.01415	-.01035	-.01083	.77258	.64448
10.270	40.253	1.17424	-.03770	.05961	-.02755	-.01032	-.01154	.85767	.80424
10.270	42.135	1.25943	-.03661	.05971	-.02830	-.01022	-.01165	.89389	.88921

AMES 3.5-190 OAGB (011-M7+M14)

(REQ007) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = 5.000 ELEVON = .000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 29/ 0 RN/L = 1.59

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	12.805	-.00295	-.01078	-.00918	-.01274	-.00534	-.01240	-.00808	-.00445	-.00917
10.270	16.678	-.00392	-.01112	-.00935	-.01299	-.00414	-.01278	-.00819	-.00476	-.00924
10.270	20.447	-.00422	-.01067	-.00935	-.01274	-.00441	-.01380	-.00819	-.00427	-.00917
10.270	24.602	-.00364	-.00948	-.00890	-.01240	-.00287	-.01240	-.00775	-.00277	-.00745
10.270	28.532	-.00325	-.00789	-.00772	-.01129	.00011	-.01240	-.00508	-.00228	-.00586
10.270	32.338	-.00218	-.00669	-.00687	-.01018	.00267	-.01139	-.00563	-.00072	-.00406
10.270	36.339	-.00110	-.00459	-.00456	-.00839	.00805	-.00846	-.00401	.00203	-.00156
10.270	40.253	.00397	-.00095	-.00096	-.00447	.00763	-.00369	-.00066	.00453	.00155
10.270	42.135	.00427	-.00038	-.00096	-.00447	-.00030	-.00162	-.00060	.00454	.00204

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# 0A88 TABULATED SOURCE DATA

PAGE 11

AMES 3.5-190 0A88 (011-M7-M14)

(REQ008) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = 5.000 ELEVON = -40.000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 30/ 0 RN/L = 1.57

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	12.844	.14473	-.04368	.05848	.00764	-.00997	.01427	.12811	.08919
10.270	16.704	.24401	-.04198	.05914	.01558	-.00984	.01276	.21672	.12679
10.270	20.491	.34971	-.04150	.05960	.02107	-.00976	.01142	.30672	.17824
10.270	24.637	.48581	-.03946	.06180	.03027	-.01040	.01047	.41582	.25869
10.270	28.504	.62631	-.03832	.06406	.03551	-.01051	.00942	.51983	.35518
10.270	32.323	.76520	-.03800	.06458	.03841	-.01024	.00809	.61210	.46371
10.270	36.324	.92411	-.03723	.06489	.04076	-.01030	.00755	.70610	.59967
10.270	40.229	1.07698	-.03450	.06421	.04159	-.00986	.00796	.78076	.74459
10.270	42.059	1.15555	-.03608	.06432	.04294	-.01007	.00650	.81485	.82185

AMES 3.5-190 0A88 (011-M7-M14)

(AEQ008) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = 5.000 ELEVON = -40.000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 30/ 0 RN/L = 1.57

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPB5	CPB6	CPB7	CPB8	CPB9	CPB10	CPB11	CPB12	CPB13	CPB14	CPB15	CPB16	CPB17	CPB18	CPB19	CPB20	CPB21	CPB22	CPB23	CPB24	CPB25	CPB26	CPB27	CPB28	CPB29	CPB30	CPB31	CPB32	CPB33	CPB34	CPB35	CPB36	CPB37	CPB38	CPB39	CPB40	CPB41	CPB42	CPB43	CPB44	CPB45	CPB46	CPB47	CPB48	CPB49	CPB50	CPB51	CPB52	CPB53	CPB54	CPB55	CPB56	CPB57	CPB58	CPB59	CPB60	CPB61	CPB62	CPB63	CPB64	CPB65	CPB66	CPB67	CPB68	CPB69	CPB70	CPB71	CPB72	CPB73	CPB74	CPB75	CPB76	CPB77	CPB78	CPB79	CPB80	CPB81	CPB82	CPB83	CPB84	CPB85	CPB86	CPB87	CPB88	CPB89	CPB90	CPB91	CPB92	CPB93	CPB94	CPB95	CPB96	CPB97	CPB98	CPB99	CPB100	CPB101	CPB102	CPB103	CPB104	CPB105	CPB106	CPB107	CPB108	CPB109	CPB110	CPB111	CPB112	CPB113	CPB114	CPB115	CPB116	CPB117	CPB118	CPB119	CPB120	CPB121	CPB122	CPB123	CPB124	CPB125	CPB126	CPB127	CPB128	CPB129	CPB130	CPB131	CPB132	CPB133	CPB134	CPB135	CPB136	CPB137	CPB138	CPB139	CPB140	CPB141	CPB142	CPB143	CPB144	CPB145	CPB146	CPB147	CPB148	CPB149	CPB150	CPB151	CPB152	CPB153	CPB154	CPB155	CPB156	CPB157	CPB158	CPB159	CPB160	CPB161	CPB162	CPB163	CPB164	CPB165	CPB166	CPB167	CPB168	CPB169	CPB170	CPB171	CPB172	CPB173	CPB174	CPB175	CPB176	CPB177	CPB178	CPB179	CPB180	CPB181	CPB182	CPB183	CPB184	CPB185	CPB186	CPB187	CPB188	CPB189	CPB190	CPB191	CPB192	CPB193	CPB194	CPB195	CPB196	CPB197	CPB198	CPB199	CPB200	CPB201	CPB202	CPB203	CPB204	CPB205	CPB206	CPB207	CPB208	CPB209	CPB210	CPB211	CPB212	CPB213	CPB214	CPB215	CPB216	CPB217	CPB218	CPB219	CPB220	CPB221	CPB222	CPB223	CPB224	CPB225	CPB226	CPB227	CPB228	CPB229	CPB230	CPB231	CPB232	CPB233	CPB234	CPB235	CPB236	CPB237	CPB238	CPB239	CPB240	CPB241	CPB242	CPB243	CPB244	CPB245	CPB246	CPB247	CPB248	CPB249	CPB250	CPB251	CPB252	CPB253	CPB254	CPB255	CPB256	CPB257	CPB258	CPB259	CPB260	CPB261	CPB262	CPB263	CPB264	CPB265	CPB266	CPB267	CPB268	CPB269	CPB270	CPB271	CPB272	CPB273	CPB274	CPB275	CPB276	CPB277	CPB278	CPB279	CPB280	CPB281	CPB282	CPB283	CPB284	CPB285	CPB286	CPB287	CPB288	CPB289	CPB290	CPB291	CPB292	CPB293	CPB294	CPB295	CPB296	CPB297	CPB298	CPB299	CPB300	CPB301	CPB302	CPB303	CPB304	CPB305	CPB306	CPB307	CPB308	CPB309	CPB310	CPB311	CPB312	CPB313	CPB314	CPB315	CPB316	CPB317	CPB318	CPB319	CPB320	CPB321	CPB322	CPB323	CPB324	CPB325	CPB326	CPB327	CPB328	CPB329	CPB330	CPB331	CPB332	CPB333	CPB334	CPB335	CPB336	CPB337	CPB338	CPB339	CPB340	CPB341	CPB342	CPB343	CPB344	CPB345	CPB346	CPB347	CPB348	CPB349	CPB350	CPB351	CPB352	CPB353	CPB354	CPB355	CPB356	CPB357	CPB358	CPB359	CPB360	CPB361	CPB362	CPB363	CPB364	CPB365	CPB366	CPB367	CPB368	CPB369	CPB370	CPB371	CPB372	CPB373	CPB374	CPB375	CPB376	CPB377	CPB378	CPB379	CPB380	CPB381	CPB382	CPB383	CPB384	CPB385	CPB386	CPB387	CPB388	CPB389	CPB390	CPB391	CPB392	CPB393	CPB394	CPB395	CPB396	CPB397	CPB398	CPB399	CPB400	CPB401	CPB402	CPB403	CPB404	CPB405	CPB406	CPB407	CPB408	CPB409	CPB410	CPB411	CPB412	CPB413	CPB414	CPB415	CPB416	CPB417	CPB418	CPB419	CPB420	CPB421	CPB422	CPB423	CPB424	CPB425	CPB426	CPB427	CPB428	CPB429	CPB430	CPB431	CPB432	CPB433	CPB434	CPB435	CPB436	CPB437	CPB438	CPB439	CPB440	CPB441	CPB442	CPB443	CPB444	CPB445	CPB446	CPB447	CPB448	CPB449	CPB450	CPB451	CPB452	CPB453	CPB454	CPB455	CPB456	CPB457	CPB458	CPB459	CPB460	CPB461	CPB462	CPB463	CPB464	CPB465	CPB466	CPB467	CPB468	CPB469	CPB470	CPB471	CPB472	CPB473	CPB474	CPB475	CPB476	CPB477	CPB478	CPB479	CPB480	CPB481	CPB482	CPB483	CPB484	CPB485	CPB486	CPB487	CPB488	CPB489	CPB490	CPB491	CPB492	CPB493	CPB494	CPB495	CPB496	CPB497	CPB498	CPB499	CPB500	CPB501	CPB502	CPB503	CPB504	CPB505	CPB506	CPB507	CPB508	CPB509	CPB510	CPB511	CPB512	CPB513	CPB514	CPB515	CPB516	CPB517	CPB518	CPB519	CPB520	CPB521	CPB522	CPB523	CPB524	CPB525	CPB526	CPB527	CPB528	CPB529	CPB530	CPB531	CPB532	CPB533	CPB534	CPB535	CPB536	CPB537	CPB538	CPB539	CPB540	CPB541	CPB542	CPB543	CPB544	CPB545	CPB546	CPB547	CPB548	CPB549	CPB550	CPB551	CPB552	CPB553	CPB554	CPB555	CPB556	CPB557	CPB558	CPB559	CPB560	CPB561	CPB562	CPB563	CPB564	CPB565	CPB566	CPB567	CPB568	CPB569	CPB570	CPB571	CPB572	CPB573	CPB574	CPB575	CPB576	CPB577	CPB578	CPB579	CPB580	CPB581	CPB582	CPB583	CPB584	CPB585	CPB586	CPB587	CPB588	CPB589	CPB590	CPB591	CPB592	CPB593	CPB594	CPB595	CPB596	CPB597	CPB598	CPB599	CPB600	CPB601	CPB602	CPB603	CPB604	CPB605	CPB606	CPB607	CPB608	CPB609	CPB610	CPB611	CPB612	CPB613	CPB614	CPB615	CPB616	CPB617	CPB618	CPB619	CPB620	CPB621	CPB622	CPB623	CPB624	CPB625	CPB626	CPB627	CPB628	CPB629	CPB630	CPB631	CPB632	CPB633	CPB634	CPB635	CPB636	CPB637	CPB638	CPB639	CPB640	CPB641	CPB642	CPB643	CPB644	CPB645	CPB646	CPB647	CPB648	CPB649	CPB650	CPB651	CPB652	CPB653	CPB654	CPB655	CPB656	CPB657	CPB658	CPB659	CPB660	CPB661	CPB662	CPB663	CPB664	CPB665	CPB666	CPB667	CPB668	CPB669	CPB670	CPB671	CPB672	CPB673	CPB674	CPB675	CPB676	CPB677	CPB678	CPB679	CPB680	CPB681	CPB682	CPB683	CPB684	CPB685	CPB686	CPB687	CPB688	CPB689	CPB690	CPB691	CPB692	CPB693	CPB694	CPB695	CPB696	CPB697	CPB698	CPB699	CPB700	CPB701	CPB702	CPB703	CPB704	CPB705	CPB706	CPB707	CPB708	CPB709	CPB710	CPB711	CPB712	CPB713	CPB714	CPB715	CPB716	CPB717	CPB718	CPB719	CPB720	CPB721	CPB722	CPB723	CPB724	CPB725	CPB726	CPB727	CPB728	C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## 0A98 TABULATED SOURCE DATA

(REQ009) ( 03 AUG 74 )

AMES 3.5-190 0A98 (011-M7+M14-N24)

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 5/ 0 RN/L = 1.54

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.987	.20474	-.00397	.06042	-.01644	-.00067	.00012	.18773	.10162
5.250	16.075	.32231	-.00383	.05990	-.01520	-.00076	.00009	.29312	.14680
5.250	20.058	.44932	-.00387	.05997	-.01478	-.00084	.00014	.40149	.21043
5.250	24.400	.60331	-.00451	.06019	-.01585	-.00094	.00011	.52456	.30404
5.250	28.467	.76212	-.00499	.06029	-.01935	-.00117	.00011	.64123	.41628
5.250	32.509	.93171	-.00519	.06051	-.02610	-.00144	.00018	.75319	.55176
5.250	36.635	1.11028	-.00497	.06051	-.03525	-.00142	.00016	.85484	.71108
5.250	40.832	1.29229	-.00520	.05881	-.04658	-.00163	.00020	.93933	.88945
5.250	42.762	1.37632	-.00551	.05701	-.05289	-.00188	-.00003	.97175	.97632

RUN NO. 20/ 0 RN/L = 1.56

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.870	.15223	-.00452	.05405	-.00726	-.00053	.00014	.13785	.08421
10.270	15.881	.25622	-.00406	.05431	-.00185	-.00071	.00001	.23158	.12234
10.270	19.866	.37631	-.00329	.05627	.00169	-.00070	-.00020	.33479	.18080
10.270	24.142	.52714	-.00246	.05890	.00210	-.00076	-.00009	.45694	.26935
10.270	28.145	.68946	-.00281	.06088	-.00232	-.00104	-.00014	.57922	.37890
10.270	32.039	.84872	-.00265	.06117	-.00751	-.00104	-.00040	.68700	.50210
10.270	36.168	1.02405	-.00375	.06142	-.01935	-.00116	-.00087	.79045	.65394
10.270	40.240	1.20233	-.00334	.06086	-.02675	-.00133	-.00094	.87848	.82315
10.270	42.152	1.28792	-.00227	.05977	-.03086	-.00152	.00015	.91471	.90863

ORIGINAL PAGE IS  
OF POOR QUALITY

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 5/ 0 RN/L = 1.54

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.987	-.03236	-.04093	-.03863	-.03704	.02006	-.03693	-.03162	-.02861	-.03525
5.250	16.075	-.03625	-.04211	-.04054	-.03979	.00076	-.03955	-.03576	-.03030	-.03672
5.250	20.058	-.03696	-.04197	-.04074	-.04026	-.01647	-.04079	-.03458	-.03061	-.03420
5.250	24.400	-.03576	-.03956	-.03864	-.03853	-.02272	-.03971	-.03414	-.03199	-.03495
5.250	28.467	-.03575	-.03962	-.03806	-.03788	-.02074	-.03985	-.03336	-.03201	-.03466
5.250	32.509	-.03502	-.03890	-.03744	-.03753	-.01663	-.03978	-.03494	-.03089	-.03199
5.250	36.635	-.03383	-.03625	-.03553	-.03571	-.02079	-.03788	-.03436	-.02768	-.02805
5.250	40.832	-.03242	-.03480	-.03439	-.03422	-.02490	-.03664	-.03474	-.02572	-.02557
5.250	42.762	-.03072	-.03286	-.03293	-.03259	-.02582	-.03474	-.03399	-.02590	-.02353

RUN NO. 20/ 0 RN/L = 1.56

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.870	.00281	-.00576	-.00342	-.00540	.00357	-.00842	-.00129	.00351	-.00143
10.270	15.881	.00242	-.00593	-.00381	-.00600	.00152	-.00919	-.00168	.00314	-.00149
10.270	19.866	.00124	-.00491	-.00348	-.00592	.00023	-.00957	-.00163	.00356	-.00143
10.270	24.142	.00193	-.00423	-.00252	-.00498	.00151	-.00893	-.00113	.00431	-.00032
10.270	28.145	.00339	-.00236	-.00134	-.00336	.00552	-.00792	-.00074	.00519	.00092
10.270	32.039	.00426	-.00015	.00012	-.00208	.00842	-.00728	.00048	.00693	.00320
10.270	36.168	.00564	.00100	.00126	-.00105	.01382	-.00511	.00127	.00876	.00543
10.270	40.240	.00936	.00384	.00453	.00151	.01476	.00023	.00434	.01126	.00979
10.270	42.152	.01318	.00766	.00781	.00485	.00530	.00202	.00558	.01202	.01244

ORIGINAL PAGE IS  
 OF POOR QUALITY

(REQ010) ( 03 AUG 74 )

AMES 3.5-190 0A98 (011-M7+M14-N24)

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = -10.000  
 BDFLAP = -11.700 SPDBRK = 55.000  
 RUDDER = .000

RUN NO. 6/ 0 RN/L = 1.61

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.943	.19248	-.00469	.06058	-.00792	-.00074	.00013	.17578	.09910
5.250	16.021	.30511	-.00440	.05968	-.00388	-.00082	.00010	.27679	.14157
5.250	19.990	.42722	-.00470	.05934	-.00026	-.00099	.00009	.38119	.20182
5.250	24.398	.57754	-.00557	.05894	.00358	-.00116	.00001	.50161	.29224
5.250	28.465	.73006	-.00536	.05858	.00454	-.00140	.00003	.61388	.39946
5.250	32.464	.89109	-.00550	.05769	.00278	-.00178	.00013	.72087	.52699
5.250	36.667	1.06838	-.00558	.05774	-.00280	-.00198	.00002	.82249	.68432
5.250	40.811	1.24178	-.00581	.05485	-.00932	-.00213	-.00019	.90415	.85294
5.250	42.814	1.32633	-.00821	.05148	-.01345	-.00250	-.00033	.93796	.93917

RUN NO. 21/ 0 RN/L = 1.59

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.885	.14348	-.00271	.05358	-.00262	-.00046	.00015	.12937	.08198
10.270	15.916	.24565	-.00308	.05392	.00658	-.00064	.00001	.22144	.11922
10.270	19.859	.36089	-.00182	.05552	.01282	-.00052	.00041	.32057	.17482
10.270	24.129	.50476	-.00227	.05714	.01796	-.00064	.00021	.43731	.25849
10.270	28.150	.65133	-.00221	.05827	.01917	-.00092	.00026	.54679	.35867
10.270	32.028	.80925	-.00235	.05969	.02082	-.00102	-.00006	.65441	.47978
10.270	36.194	.98062	-.00183	.05876	.01495	-.00116	.00088	.75669	.62650
10.270	40.237	1.15978	-.00218	.05688	.00673	-.00112	.00005	.84860	.79258
10.270	42.162	1.23085	-.00231	.05583	.00846	-.00122	.00042	.87489	.86757

ORIGINAL PAGE IS  
 OF POOR QUALITY

## 0A98 TABULATED SOURCE DATA

AHES 3.5-190 0A98 (011-M7-M14-M24) (AEQ010) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 836.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = -10.000  
 BOFLAP = -11.700 SPDBRK = 55.000  
 RUDDER = .000

RUN NO. 6/ 0 RN/L = 1.61

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.943	-.03446	-.04368	-.04199	-.03987	.01691	-.04431	-.03418	-.03184	-.03798
5.250	16.021	-.03776	-.04445	-.04343	-.04178	-.00219	-.04590	-.03759	-.03391	-.04003
5.250	19.990	-.03882	-.04481	-.04388	-.04217	-.01925	-.04676	-.03693	-.03353	-.03728
5.250	24.398	-.03787	-.04227	-.04159	-.04124	-.02636	-.04532	-.03688	-.03488	-.03722
5.250	28.465	-.03860	-.04282	-.04133	-.04114	-.02459	-.04524	-.03646	-.03498	-.03693
5.250	32.464	-.03917	-.04234	-.04163	-.04110	-.02031	-.04532	-.03842	-.03413	-.03603
5.250	36.667	-.03602	-.03963	-.03859	-.03844	-.02440	-.04234	-.03682	-.03010	-.02980
5.250	40.811	-.03411	-.03669	-.03675	-.03677	-.02903	-.04010	-.03579	-.02528	-.02496
5.250	42.814	-.03211	-.03481	-.03528	-.03521	-.02906	-.03765	-.03434	-.02172	-.02205

RUN NO. 21/ 0 RN/L = 1.59

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.885	-.00516	-.01155	-.01029	-.01235	-.00131	-.01474	-.00779	-.00468	-.00851
10.270	15.916	-.00603	-.01172	-.01057	-.01294	-.00463	-.01537	-.00818	-.00487	-.00851
10.270	19.859	-.00584	-.01110	-.01012	-.01243	-.00523	-.01537	-.00807	-.00456	-.00837
10.270	24.129	-.00545	-.01042	-.00928	-.01167	-.00378	-.01436	-.00768	-.00394	-.00720
10.270	28.150	-.00428	-.00928	-.00815	-.01022	-.00079	-.01385	-.00706	-.00300	-.00637
10.270	32.028	-.00340	-.00752	-.00697	-.00928	.00201	-.01296	-.00640	-.00169	-.00423
10.270	36.194	-.00194	-.00605	-.00556	-.00818	.00687	-.01055	-.00545	.00099	-.00049
10.270	40.237	.00040	-.00486	-.00427	-.00681	.00653	-.00877	-.00478	.00261	.00186
10.270	42.162	.00089	-.00372	-.00353	-.00684	-.00257	-.00788	-.00467	.00224	.00311

ORIGINAL PAGE IS  
OF POOR QUALITY

## 0A98 TABULATED SOURCE DATA

(REC0011) ( 03 AUG 74 )

AMES 3.5-190 0A98 (011-M7+M14-N24)

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6000 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = -40.000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 7/ 0 RN/L = 1.61

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	18.000	.16975	-.00348	.07122	.00678	-.00045	.00033	.15024	.10477
5.250	18.010	.08203	-.00408	.08754	.01042	-.00047	.00035	.25244	.14274
5.250	20.000	.40950	-.00418	.06582	.01468	-.00075	.00015	.35924	.20131
5.250	24.423	.55171	-.00428	.08539	.01994	-.00088	.00016	.47531	.28765
5.250	28.487	.69915	-.00467	.06637	.02412	-.00113	.00009	.58285	.39180
5.250	32.451	.85198	-.00474	.06757	.02639	-.00132	.00018	.68269	.51417
5.250	36.654	1.01617	-.00496	.06604	.02946	-.00160	.00012	.77581	.65960
5.250	40.792	1.18253	-.00502	.06462	.02857	-.00190	.00014	.85307	.82148
5.250	42.736	1.26243	-.00543	.06275	.02763	-.00199	-.00015	.88466	.90280

RUN NO. 22/ 0 RN/L = 1.46

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.958	.13075	-.00320	.06099	.00638	-.00057	.00024	.11528	.08676
10.270	15.964	.23209	-.00331	.05941	.01318	-.00048	-.00009	.20680	.12095
10.270	19.899	.34487	-.00257	.06026	.02095	-.00047	.00004	.30377	.17404
10.270	24.168	.48931	-.00297	.06186	.02852	-.00081	-.00013	.42109	.25677
10.270	28.098	.62470	-.00301	.06517	.03375	-.00084	-.00025	.52038	.35170
10.270	32.036	.77998	-.00269	.06653	.04026	-.00102	-.00057	.62591	.47014
10.270	36.138	.94173	-.00162	.06537	.04138	-.00116	.00028	.72200	.60816
10.270	40.091	1.10142	-.00211	.06701	.04536	-.00142	.00045	.79947	.76057
10.270	42.091	1.18414	-.00224	.06579	.04183	-.00133	.00011	.83463	.84256

ORIGINAL PAGE IS  
OF POOR QUALITY



REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YMRP = .0000 IN.YO  
BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
SCALE = .0150  
BETA = .000 ELEVON = -40.000  
BDFLAP = -11.700 SPDBRK = 55.000  
RUDDER = .000

PARAMETRIC DATA

RUN NO. 7/ 0 RV/L = 1.61

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	12.008	-.03108	-.04187	-.04108	-.03953	.01744	-.04423	-.03384	-.02923	-.03538
5.250	16.019	-.03503	-.04279	-.04196	-.04012	-.00423	-.04503	-.03602	-.03115	-.03749
5.250	20.068	-.03615	-.04315	-.04221	-.04164	-.02058	-.04597	-.03557	-.03283	-.03642
5.250	24.423	-.03547	-.04161	-.04056	-.04041	-.02545	-.04459	-.03553	-.03398	-.03697
5.250	28.487	-.03587	-.04132	-.04038	-.04096	-.02259	-.04488	-.03519	-.03327	-.03539
5.250	32.451	-.03492	-.04015	-.03960	-.03998	-.01953	-.04409	-.03549	-.03209	-.03255
5.250	36.654	-.03250	-.03799	-.03640	-.03742	-.02376	-.04119	-.03497	-.02896	-.02929
5.250	40.792	-.03063	-.03580	-.03440	-.03534	-.02854	-.03817	-.03433	-.02789	-.02573
5.250	42.736	-.02797	-.03284	-.03149	-.03229	-.02812	-.03450	-.03261	-.02727	-.02418

RUN NO. 22/ 0 RV/L = 1.48

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.958	.00492	-.00533	-.00227	-.00116	.00797	-.00457	.00004	.00520	-.00055
10.270	15.864	.00390	-.00535	-.00274	-.00187	.00424	-.00536	-.00043	.00448	-.00085
10.270	19.899	.00360	-.00512	-.00235	-.00213	.00346	-.00562	-.00077	.00447	-.00107
10.270	24.168	.00310	-.00353	-.00128	-.00102	.00482	-.00485	.00056	.00559	.00039
10.270	28.098	.00388	-.00245	-.00055	-.00025	.00679	-.00447	.00079	.00640	.00143
10.270	32.036	.00567	-.00032	.00180	.00191	.01118	-.00305	.00215	.00838	.00437
10.270	36.138	.00607	.00099	.00271	.00234	.01718	-.00203	.00260	.01039	.00640
10.270	40.091	.00792	.00213	.00441	.00302	.02008	-.00012	.00349	.01195	.00938
10.270	42.091	.00886	.00359	.00541	.00426	.01131	.00273	.00426	.01144	.01069

ORIGINAL PAGE IS  
OF POOR QUALITY



(REQ012) ( 03 AUG 74 )

AMES 3.5-190 0A98 (011-M7+M14-N24)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = -40.000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 31/ 0 RN/L = 1.45

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.423	.11504	-.04446	.05923	.00452	-.01026	-.00126	.10103	.08084
10.270	15.512	.21354	-.04377	.05890	.01286	-.00987	-.00280	.19001	.11386
10.270	19.821	.33489	-.04294	.05988	.02034	-.00975	-.00448	.29474	.16869
10.270	23.831	.46413	-.04141	.06171	.02690	-.01015	-.00598	.39962	.24398
10.270	27.984	.60873	-.04036	.06404	.03238	-.01024	-.00739	.50750	.34218
10.270	32.135	.76759	-.03865	.06564	.03859	-.01043	-.00732	.61507	.46388
10.270	36.284	.92993	-.03738	.06554	.04029	-.01013	-.00773	.71082	.60316
10.270	40.382	1.09125	-.03638	.06484	.04226	-.00984	-.00843	.78924	.75640
10.270	42.500	1.17982	-.03579	.06448	.04351	-.01002	-.00838	.82630	.84461

AMES 3.5-190 0A98 (011-M7+M14-N24)

(REQ012) ( 03 AUG 74 )

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELEVON = -40.000  
 BDFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 31/ 0 RN/L = 1.45

MACH	ALPHA	CP81	CP82	CP83	CP84	CPCAV	CP85	CPV3	CPV2	CPV1
10.270	11.423	.00469	-.00602	-.00233	-.00485	.00056	-.00608	-.00253	.00228	-.00309
10.270	15.512	.01156	-.00595	-.00220	-.00561	.00221	-.00607	-.00320	.00078	-.00211
10.270	19.821	.03442	-.00504	-.00232	-.00570	.00229	-.00633	-.00298	.00085	-.00294
10.270	23.831	.03361	-.00395	-.00175	-.00527	.00453	-.00607	-.00169	.00235	-.00211
10.270	27.984	.03313	-.00252	-.00061	-.00406	.00738	-.00594	-.00129	.00330	.00006
10.270	32.135	.00472	.00013	.00111	-.00268	.01232	-.00452	.00002	.00470	.00230
10.270	36.284	.00522	.00083	.00282	-.00087	.01976	-.00221	.00171	.00679	.00531
10.270	40.382	.00827	.00358	.00492	.00172	.02045	.00124	.00346	.00968	.00839
10.270	42.500	.00996	.00474	.00602	.00198	.01011	.00204	.00332	.00869	.00840

ORIGINAL PAGE IS  
 OF POOR QUALITY



## OASB TABULATED SOURCE DATA

(RE0013) ( 03 AUG 74 )

AMES 3.5-190 OASB (011-N24+DUMMY STING)

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YMRP = .0000 IN.YO  
BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = .000  
BDFLAP = -11.700 SPOBRK = 55.000  
RUDDER = .000

RUN NO. 13/ 0 RN/L = 1.75

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.953	.20395	-.00386	.05889	-.01719	-.00073	.00017	.18733	.09986
5.250	16.078	.32141	-.00383	.05830	-.01640	-.00081	.00017	.29269	.14503
5.250	20.039	.44843	-.00415	.05940	-.01683	-.00071	.00006	.40093	.20946
5.250	24.436	.60330	-.00466	.06056	-.01793	-.00086	.00007	.52420	.30471
5.250	28.497	.76042	-.00484	.06157	-.02142	-.00100	.00010	.63891	.41692
5.250	32.492	.92786	-.00455	.06180	-.02765	-.00132	.00017	.74943	.55055
5.250	36.734	1.10870	-.00477	.05966	-.03657	-.00149	.00009	.85285	.71093
5.250	40.867	1.29047	-.00508	.05816	-.04851	-.00165	.00000	.93783	.88836
5.250	42.856	1.36054	-.00514	.05662	-.05504	-.00180	-.00010	.97352	.98048

RUN NO. 14/ 0 RN/L = 1.44

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.962	.13983	-.00453	.05358	-.00225	-.00047	.00005	.12569	.08140
10.270	15.913	.24499	-.00395	.05398	.00312	-.00049	-.00003	.22080	.11908
10.270	19.856	.36545	-.00406	.05587	.00613	-.00046	.00013	.32474	.17667
10.270	24.169	.51627	-.00434	.05820	.00676	-.00065	.00015	.44719	.26447
10.270	28.098	.67245	-.00430	.06035	.00408	-.00072	-.00020	.56478	.36995
10.270	31.974	.83110	-.00356	.06145	-.00156	-.00084	.00024	.67247	.49223
10.270	36.105	1.00681	-.00387	.06158	-.01115	-.00078	-.00050	.77715	.64304
10.270	40.229	1.19475	-.00387	.06102	-.02259	-.00103	.00019	.87275	.81821
10.270	42.142	1.28052	-.00433	.06031	-.02926	-.00105	-.00088	.90902	.90392

ORIGINAL PAGE IS  
OF POOR QUALITY

AMES 3.5-190 0A98 (011-N24+DUMMY STING)

(AE0013) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BOFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 13/ 0 RN/L = 1.75

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.953	-.03108	-.03954	-.03833	-.03748	-.01646	-.04036	-.02700	-.02205	-.02590
5.250	16.078	-.03264	-.03970	-.03868	-.03875	-.00831	-.04158	-.02688	-.02666	-.03143
5.250	20.039	-.03408	-.03963	-.03957	-.04040	-.02219	-.04266	-.03578	-.02905	-.03304
5.250	24.436	-.03461	-.03882	-.03929	-.03989	-.02835	-.04315	-.03533	-.03104	-.03209
5.250	28.497	-.03332	-.03782	-.03766	-.03875	-.02687	-.04217	-.03360	-.02986	-.02923
5.250	32.492	-.03304	-.03794	-.03800	-.03920	-.02353	-.04257	-.03504	-.02993	-.02864
5.250	36.734	-.03214	-.03675	-.03701	-.03845	-.02667	-.04094	-.03445	-.02838	-.02792
5.250	40.867	-.03165	-.03600	-.03688	-.03818	-.02841	-.03918	-.03485	-.02786	-.02699
5.250	42.856	-.03011	-.03448	-.03519	-.03723	-.02950	-.03634	-.03374	-.02865	-.02470

RUN NO. 14/ 0 RN/L = 1.44

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.962	.00602	-.00335	-.00179	-.00177	.00163	-.00208	.00147	.00788	.00289
10.270	15.913	.00446	-.00368	-.00269	-.00271	-.00293	-.00285	.00036	.00657	.00234
10.270	19.856	.00475	-.00368	-.00281	-.00280	-.00370	-.00336	.00058	.00645	.00227
10.270	24.169	.00454	-.00260	-.00185	-.00212	-.00294	-.00363	.00124	.00700	.00261
10.270	28.098	.00504	-.00082	-.00042	-.00117	-.00113	-.00311	.00170	.00795	.00380
10.270	31.974	.00663	.00091	.00175	.00090	.00293	-.00182	.00385	.01061	.00667
10.270	36.105	.00731	.00176	.00272	.00124	.00705	-.00144	.00452	.01135	.00680
10.270	40.229	.01105	.00532	.00636	.00477	.01274	.00319	.00779	.01394	.01072
10.270	42.142	.01436	.00855	.00912	.00749	.01115	.00701	.01012	.01308	.01235

ORIGINAL PAGE IS  
 OF POOR QUALITY

0A98 TABULATED SOURCE DATA

AMES 3.5-190 0A98 (011-NEW+DUMMY STING) (REQ014) ( 03 AUG 74 )

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YMRP = .0000 IN.YO  
BREF = 938.6800 IN. ZMRP = 375.0000 IN.ZO  
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = -10.000  
BOFLAP = -11.700 SPOBRK = 55.000  
RUDDER = .000

RUN NO. 11/ 0 RN/L = 1.79

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.984	.18499	-.00384	.05895	-.00882	-.00048	.00017	.17850	.09815
5.250	16.055	.30748	-.00380	.05838	-.00583	-.00058	.00018	.27934	.14114
5.250	20.070	.43228	-.00414	.05915	-.00275	-.00076	.00011	.36572	.20390
5.250	28.412	.72833	-.00502	.06082	.00171	-.00102	.00010	.61176	.39986
5.250	32.510	.89346	-.00464	.05969	.00058	-.00128	.00012	.72138	.53052
5.250	36.671	1.06565	-.00474	.05665	-.00349	-.00185	.00008	.82090	.68186
5.250	40.812	1.24039	-.00511	.05393	-.00928	-.00182	-.00012	.90355	.85150
5.250	42.787	1.32588	-.00503	.05202	-.01377	-.00182	-.00022	.93754	.93898

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YMRP = .0000 IN.YO  
BREF = 938.6800 IN. ZMRP = 375.0000 IN.ZO  
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = -10.000  
BOFLAP = -11.700 SPOBRK = 55.000  
RUDDER = .000

AMES 3.5-190 0A98 (011-NEW+DUMMY STING) (AEQ014) ( 03 AUG 74 )

RUN NO. 11/ 0 RN/L = 1.79

MACH	ALPHA	CP81	CP82	CP83	CP84	CPCAV	CP85	CPV3	CPV2	CPV1
5.250	11.984	-.03104	-.03909	-.03830	-.03689	.01652	-.03968	-.02674	-.02204	-.02590
5.250	16.055	-.03242	-.03950	-.03912	-.03820	-.00684	-.04067	-.02773	-.02612	-.03070
5.250	20.070	-.03398	-.03999	-.03973	-.03981	-.02235	-.04226	-.03582	-.02903	-.03264
5.250	28.412	-.03281	-.03720	-.03729	-.03864	-.02662	-.04038	-.03342	-.02902	-.02876
5.250	32.510	-.03324	-.03700	-.03735	-.03873	-.02345	-.04190	-.03447	-.03023	-.02907
5.250	36.671	-.03108	-.03556	-.03558	-.03745	-.02655	-.04009	-.03322	-.02778	-.02807
5.250	40.812	-.03007	-.03544	-.03520	-.03728	-.02841	-.03841	-.03262	-.02814	-.02629
5.250	42.787	-.02785	-.03349	-.03324	-.03591	-.02810	-.03537	-.03090	-.02668	-.02282

ORIGINAL PAGE IS  
OF POOR QUALITY

AMES 3.5-190 0A98 (011-N24+DUMMY STING)

(REQ015) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = -40.000  
 BOFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 10/ 0 RN/L = 2.07

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.975	.16938	-.00344	.06952	.00570	-.00037	.00049	.15127	.10314
5.250	16.024	.28188	-.00403	.06953	.00863	-.00056	.00047	.25284	.14079
5.250	20.051	.40423	-.00412	.06446	.01202	-.00077	.00037	.35763	.19914
5.250	24.406	.54914	-.00437	.06527	.01738	-.00098	.00027	.47310	.28634
5.250	28.455	.69460	-.00436	.06595	.02227	-.00116	.00028	.57926	.38894
5.250	32.476	.84815	-.00418	.06597	.02575	-.00145	.00030	.68010	.51106
5.250	36.657	1.01209	-.00426	.06495	.02785	-.00167	.00035	.77314	.65635
5.250	40.811	1.17798	-.00453	.06270	.02825	-.00182	.00027	.85060	.81734
5.250	42.758	1.25440	-.00487	.06150	.02778	-.00191	.00020	.87927	.89677

AMES 3.5-190 0A98 (011-N24+DUMMY STING)

(REQ015) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = -40.000  
 BOFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 10/ 0 RN/L = 2.07

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.975	-.02948	-.03108	-.03593	-.03586	.01882	-.03768	-.02747	-.01940	-.02258
5.250	16.024	-.03053	-.03773	-.03573	-.03649	-.00482	-.03847	-.02607	-.02399	-.02780
5.250	20.051	-.03142	-.03757	-.03650	-.03707	-.01968	-.03904	-.03377	-.02638	-.02913
5.250	24.406	-.03225	-.01735	-.03659	-.03760	-.02571	-.03954	-.03398	-.02750	-.02751
5.250	28.455	-.03186	-.02398	-.03560	-.03687	-.02402	-.03861	-.03275	-.02747	-.02621
5.250	32.476	-.03069	-.02512	-.03387	-.03639	-.02049	-.03853	-.03243	-.02761	-.02586
5.250	36.657	-.02896	-.02951	-.03198	-.03482	-.02377	-.03623	-.03097	-.02607	-.02471
5.250	40.811	-.02757	.00248	-.03041	-.03385	-.02571	-.03379	-.02995	-.02404	-.02093
5.250	42.758	-.02512	.03034	-.02719	-.03156	-.02615	-.02977	-.02761	-.02184	-.01878

ORIGINAL PAGE IS  
OF POOR QUALITY

AMES 3.5-190 OA98 (011-N24+DUMMY STING)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 12/ 0 RN/L = 1.61

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.936	.20501	-.00457	.05919	-.01659	-.00063	.00017	.18834	.10031
5.250	16.019	.32197	-.00419	.05886	-.01595	-.00074	.00019	.29323	.14542
5.250	19.999	.45055	-.00527	.06032	-.01673	-.00080	.00013	.40275	.21077
5.250	24.419	.60686	-.00535	.06169	-.01775	-.00099	.00011	.52708	.30704
5.250	28.472	.76587	-.00594	.06284	-.02071	-.00115	.00008	.64328	.42035
5.250	32.499	.93230	-.00547	.06302	-.02639	-.00133	.00010	.75244	.55407
5.250	36.774	1.11560	-.00540	.06195	-.03554	-.00164	.00020	.85652	.71749
5.250	40.874	1.29345	-.00493	.05978	-.04602	-.00173	.00012	.93892	.89163
5.250	42.882	1.37897	-.00454	.05806	-.05195	-.00173	.00013	.97094	.98091

PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BDFLAP = -11.700 SPOBRK = 85.000  
 RUDDER = .000

AMES 3.5-190 OA98 (011-N24+DUMMY STING)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 12/ 0 RN/L = 1.61

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPB5	CPB6	CPB7	CPB8
5.250	11.936	-.02747	-.03810	-.03601	-.03296	-.03637	-.02240	-.01776	-.02135
5.250	16.019	-.02987	-.03864	-.03716	-.03516	-.03853	-.02423	-.02297	-.02557
5.250	19.999	-.03155	-.03917	-.03825	-.03737	-.04041	-.03343	-.02696	-.02795
5.250	24.419	-.03238	-.03838	-.03783	-.03736	-.04070	-.03333	-.02806	-.02988
5.250	28.472	-.03192	-.03726	-.03682	-.03632	-.04069	-.03140	-.02718	-.02880
5.250	32.499	-.03152	-.03715	-.03700	-.03661	-.04090	-.03331	-.02724	-.02834
5.250	36.774	-.03117	-.03601	-.03590	-.03626	-.04032	-.03276	-.02601	-.02750
5.250	40.874	-.02973	-.03446	-.03498	-.03514	-.03844	-.03198	-.02402	-.02590
5.250	42.882	-.02810	-.03215	-.03306	-.03402	-.03412	-.03132	-.02611	-.02476

PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BDFLAP = -11.700 SPOBRK = 85.000  
 RUDDER = .000

ORIGINAL PAGE IS  
 OF POOR QUALITY

## OA98 TABULATED SOURCE DATA

AHES 3.5-190 OA98 (011-M7+M14-N24+DUMMY STING) (REQ017) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BDFLAP = -11.700 SPDRBK = 55.000  
 RUDDER = .000

RUN NO. 34/ 0 RN/L = 1.93

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.609	.19581	-.00291	.05976	-.01635	-.00062	.00015	.17978	.09794
5.250	15.712	.31165	-.00283	.05924	-.01564	-.00071	.00025	.28396	.14143
5.250	20.095	.45196	-.00406	.05989	-.01619	-.00080	.00022	.40387	.21153
5.250	24.164	.59451	-.00478	.06076	-.01754	-.00077	.00001	.51754	.29880
5.250	28.418	.76422	-.00491	.06347	-.02269	-.00113	.00012	.64193	.41951
5.250	32.594	.93882	-.00427	.06295	-.02805	-.00108	.00012	.75705	.55876
5.250	36.964	1.13022	-.00457	.06308	-.03491	-.00148	.00007	.86513	.73002
5.250	41.083	1.31059	-.00517	.06169	-.04014	-.00164	.00051	.94732	.90776
5.250	43.241	1.41065	-.00556	.06116	-.04555	-.00191	.00043	.98573	1.01094

RUN NO. 17/ 0 RN/L = 1.59

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.860	.14747	-.00240	.05265	-.00800	-.00029	.00004	.13350	.08184
10.270	15.880	.25261	-.00311	.05366	-.00183	-.00045	.00002	.22829	.12073
10.270	19.862	.37113	-.00234	.05525	.00066	-.00049	.00007	.33028	.17805
10.270	24.114	.51834	-.00240	.05738	.00224	-.00068	.00028	.44966	.26414
10.270	28.112	.67216	-.00254	.05900	-.00090	-.00083	.00003	.56507	.36875
10.270	32.023	.83059	-.00154	.06028	-.00600	-.00092	.00071	.67223	.49154
10.270	36.136	1.00404	-.00437	.05996	-.01840	-.00098	-.00259	.77552	.64051
10.270	40.188	1.19659	-.00319	.06092	-.02282	-.00112	.00013	.87506	.81839
10.270	42.102	1.25887	-.00128	.05562	-.04906	-.00135	.00209	.89510	.88381

ORIGINAL PAGE IS  
 OF POOR QUALITY



## 0A98 TABULATED SOURCE DATA

PAGE 25

AMES 3.5-190 0A98 (011-H7+H14-N24-DUMMY STING)

(AEG017) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1078.7000 IN.XO  
LREF = 474.8000 IN. YMRP = .0000 IN.YO  
BREF = 938.8900 IN. ZMRP = 375.0000 IN.ZO  
SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = .000  
BOFLAP = -11.700 SPOBRK = 55.000  
RUDDER = .000

RUN NO. 34/ 0 RN/L = 1.93

MACH	ALPHA	CP81	CP82	CP83	CP84	CP85	CP86	CP87	CP88	CP89	CP90	CP91
5.250	11.608	-.02862	-.03213	-.03158	-.03041	-.03868	-.02361	-.02584	-.01375	-.02201		
5.250	15.712	-.02871	-.03369	-.03333	-.03243	-.03861	-.00182	-.02752	-.01982	-.02723		
5.250	20.095	-.03105	-.03403	-.03513	-.03487	-.04093	-.01773	-.02950	-.02339	-.03079		
5.250	24.164	-.03138	-.03373	-.03497	-.03482	-.04086	-.02355	-.03070	-.02431	-.02913		
5.250	28.418	-.03072	-.03373	-.03378	-.03390	-.03955	-.02107	-.03172	-.02435	-.02692		
5.250	32.594	-.03053	-.03404	-.03332	-.03467	-.03954	-.01770	-.03176	-.02412	-.02671		
5.250	36.964	-.02708	-.03230	-.03121	-.03335	-.03723	-.02450	-.03123	-.02227	-.02360		
5.250	41.083	-.02615	-.03218	-.03090	-.03347	-.03585	-.02634	-.03146	-.02165	-.02079		
5.250	43.241	-.02550	-.03083	-.02977	-.03273	-.03400	-.02521	-.03083	-.01953	-.01738		

RUN NO. 17/ 0 RN/L = 1.59

MACH	ALPHA	CP81	CP82	CP83	CP84	CP85	CP86	CP87	CP88	CP89	CP90	CP91
10.270	11.860	.00379	-.00416	-.00142	-.00302	-.00663	.00282	.00072	.00750	.00189		
10.270	15.880	.00222	-.00450	-.00222	-.00405	-.00727	-.00010	.00016	.00595	.00078		
10.270	19.862	.00163	-.00404	-.00222	-.00397	-.00727	-.00062	.00016	.00597	.00057		
10.270	24.114	.00222	-.00307	-.00148	-.00328	-.00688	.00033	.00066	.00655	.00182		
10.270	28.112	.00436	-.00137	-.00002	-.00158	-.00536	.00383	.00149	.00779	.00375		
10.270	32.023	.00534	.00064	.00151	-.00106	-.00421	.00905	.00211	.00929	.00577		
10.270	36.136	.00654	.00164	.00280	.00030	-.00222	.01548	.00378	.01081	.00679		
10.270	40.188	.01057	.00570	.00672	.00398	.00291	.01536	.00686	.01323	.01131		
10.270	42.102	.01424	.00928	.00992	.00644	.00607	.00758	.00950	.01345	.01474		

ORIGINAL PAGE IS  
OF POOR QUALITY



(REC0018) ( 03 AUG 74 )

AMES 3.5-190 0A98 (011-H7+H14-N24-DUMMY STING)

## REFERENCE DATA

SREF = 2690.0000 50.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

BETA = .000 ELEVON = -10.000  
 BOFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

## PARAMETRIC DATA

RUN NO. 36/ 0 RN/L = 1.71

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.500	.18092	-.00325	.05974	-.00933	-.00078	.00030	.16537	.09481
5.250	15.635	.29347	-.00285	.05877	-.00409	-.00085	.00037	.26677	.13569
5.250	20.000	.42606	-.00342	.05886	-.00070	-.00095	.00019	.38024	.20103
5.250	24.116	.56532	-.00427	.05943	.00149	-.00101	.00005	.49170	.28523
5.250	28.388	.72632	-.00391	.06055	.00184	-.00125	.00016	.61019	.39899
5.250	32.615	.89569	-.00406	.05993	.00030	-.00164	.00007	.72215	.53325
5.250	36.859	1.07298	-.00429	.05771	-.00361	-.00184	.00002	.82388	.68981
5.250	41.053	1.25114	-.00443	.05392	-.01051	-.00190	-.00010	.90807	.86235
5.250	43.229	1.34549	-.00444	.05266	-.01482	-.00195	-.00012	.94428	.95992

RUN NO. 15/ 0 RN/L = 1.26

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.883	.14100	-.00263	.05393	-.00248	-.00048	.00019	.12688	.08181
10.270	15.958	.24375	-.00285	.05393	.00536	-.00034	-.00023	.21953	.11887
10.270	19.855	.35695	-.00241	.05337	.01213	-.00043	.00020	.31693	.17332
10.270	24.112	.50266	-.00288	.05723	.01568	-.00073	.00042	.43542	.25759
10.270	28.112	.64872	-.00270	.05842	.01950	-.00078	.00026	.54466	.35721
10.270	32.038	.80660	-.00246	.05952	.02125	-.00103	.00030	.65217	.47834
10.270	36.120	.97416	-.00191	.05839	.01342	-.00101	.00036	.75249	.62141
10.270	40.186	1.14572	-.00280	.05722	.01366	-.00118	.00087	.83836	.78301
10.270	42.135	1.23306	-.00278	.05547	.00659	-.00106	.00030	.87718	.86838

ORIGINAL PAGE IS  
OF POOR QUALITY

## 0A98 TABULATED SOURCE DATA

APES 3.5-190 0A98 (011-H7+H14-NE4+DUMMY STINO) (AEQ018) ( 03 AUG 74 )

## PARAMETRIC DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO BETA = .000 ELEVON = -10.000  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO BOFLAP = -11.700 SPOBRK = 55.000  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO RUDDER = .000  
 SCALE = .0150

## REFERENCE DATA

RUN NO. 36/ 0 RN/L = 1.71

MACH	ALPHA	CP81	CP82	CP83	CP84	CPCAV	CP85	CPV3	CPV2	CPV1
5.250	11.500	-.03278	-.03830	-.03793	-.03738	.01682	-.04294	-.03467	-.01875	-.02541
5.250	15.635	-.03467	-.03865	-.03889	-.03899	-.00149	-.04396	-.03630	-.02374	-.03297
5.250	20.000	-.03607	-.03967	-.04041	-.04046	-.02157	-.04578	-.03694	-.02625	-.03432
5.250	24.116	-.03540	-.03917	-.03934	-.04007	-.02735	-.04476	-.03620	-.02731	-.03336
5.250	28.388	-.03516	-.03770	-.03846	-.03913	-.02445	-.04395	-.03603	-.02718	-.03168
5.250	32.615	-.03454	-.03770	-.03711	-.03898	-.02221	-.04395	-.03504	-.02639	-.03101
5.250	36.859	-.03233	-.03554	-.03548	-.03787	-.02594	-.04206	-.03445	-.02513	-.03063
5.250	41.053	-.02971	-.03479	-.03361	-.03767	-.02930	-.03959	-.03435	-.02602	-.02742
5.250	43.229	-.02792	-.03366	-.03157	-.03731	-.02875	-.03734	-.03314	-.02575	-.02253

RUN NO. 15/ 0 RN/L = 1.28

MACH	ALPHA	CP81	CP82	CP83	CP84	CPCAV	CP85	CPV3	CPV2	CPV1
10.270	11.883	.00269	-.00411	-.00408	-.00465	.00269	-.00552	-.00217	.00376	.00029
10.270	15.958	.00161	-.00463	-.00487	-.00533	-.00143	-.00616	-.00285	.00162	-.00054
10.270	19.855	.00121	-.00463	-.00465	-.00551	-.00239	-.00643	-.00297	.00155	-.00118
10.270	24.112	.00141	-.00342	-.00368	-.00456	-.00126	-.00504	-.00139	.00307	.00071
10.270	28.112	.00298	-.00211	-.00244	-.00354	.00036	-.00502	-.00094	.00406	.00203
10.270	32.038	.00437	-.00032	-.00043	-.00181	.00382	-.00347	.00020	.00660	.00448
10.270	36.120	.00427	.00065	.00093	-.00155	.00830	-.00218	.00166	.00666	.00421
10.270	40.186	.00683	.00232	.00293	-.00034	.01123	.00026	.00324	.00818	.00658
10.270	42.135	.00966	.00529	.00592	.00231	.00923	.00435	.00570	.01023	.00956

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## OASB TABULATED SOURCE DATA

(REQ019) ( 03 AUG 74 )

AMES 3.5-190 OASB (011-H7-H14-N24-DUMHY STING)

## REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1078.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.8000 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

## PARAMETRIC DATA

BETA = .000 ELEVON = -40.000  
 BOFLAP = -11.700 SPOBRK = 55.000  
 RUDDER = .000

RUN NO. 37/ 0 RN/L = 1.70

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.528	.15706	-.00293	.07099	.00613	-.00057	.00045	.13971	.10095
5.250	15.633	.26996	-.00339	.06898	.00937	-.00078	.00059	.24193	.13725
5.250	20.023	.40327	-.00350	.06519	.01414	-.00100	.00041	.35658	.19933
5.250	24.068	.53804	-.00364	.06532	.01836	-.00118	.00050	.46463	.27907
5.250	28.369	.69441	-.00394	.06718	.02168	-.00127	.00046	.57909	.38906
5.250	32.601	.85661	-.00432	.06588	.02608	-.00162	.00044	.68615	.51703
5.250	36.840	1.02434	-.00433	.06442	.02798	-.00192	.00045	.78116	.66573
5.250	41.005	1.19498	-.00454	.06423	.02694	-.00214	.00049	.85965	.83253
5.250	43.150	1.28154	-.00502	.06215	.02679	-.00222	.00034	.89246	.92181

RUN NO. 16/ 0 RN/L = 1.64

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.892	.12954	-.00433	.05790	.00551	-.00033	.00007	.11483	.08335
10.270	15.884	.23171	-.00307	.05696	.01324	-.00054	.00020	.20728	.11820
10.270	19.844	.34537	-.00300	.05789	.02025	-.00072	.00019	.30521	.17170
10.270	24.137	.48706	-.00244	.06017	.02783	-.00083	.00038	.41987	.25407
10.270	28.093	.62501	-.00188	.06231	.03350	-.00091	.00024	.52204	.34929
10.270	31.987	.77378	-.00197	.06437	.03989	-.00117	.00003	.62235	.46428
10.270	36.137	.93878	-.00237	.06534	.03984	-.00129	-.00015	.71983	.60840
10.270	40.185	1.10074	-.00241	.06497	.03948	-.00133	-.00044	.79928	.75981
10.270	42.086	1.18554	-.00314	.06445	.03976	-.00142	-.00021	.83648	.84258

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0A98 TABULATED SOURCE DATA

AMES 3.5-190 0A98 (011-M7+H14-N24-DUMMY STING) (AEQ019) ( 03 AUG 74 )

PARAMETRIC DATA

BETA = .000 ELEVON = -40.000  
BDFLAP = -11.700 SPOBRK = 55.000  
RUDDER = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YMRP = .0000 IN.YO  
BREF = 836.6800 IN. ZMRP = 375.0000 IN.ZO  
SCALE = .0150

RUN NO. 37/ 0 RN/L = 1.70

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.528	-.03372	-.03863	-.03824	-.03703	.01810	-.04254	-.03430	-.01785	-.02315
5.250	15.633	-.03487	-.03867	-.03850	-.03783	-.00119	-.04376	-.03599	-.02230	-.03189
5.250	20.023	-.03671	-.03881	-.03986	-.03969	-.02110	-.04551	-.03632	-.02584	-.03226
5.250	24.068	-.03609	-.03867	-.03908	-.03895	-.02645	-.04434	-.03583	-.02636	-.02983
5.250	28.369	-.03626	-.03867	-.03821	-.03890	-.02445	-.04419	-.03628	-.02690	-.03039
5.250	32.601	-.03493	-.03673	-.03629	-.03788	-.02232	-.04245	-.03466	-.02509	-.02897
5.250	36.840	-.03238	-.03491	-.03481	-.03688	-.02503	-.04129	-.03408	-.02424	-.02803
5.250	41.005	-.03029	-.03380	-.03225	-.03549	-.02957	-.03779	-.03290	-.02425	-.02385
5.250	43.150	-.02730	-.03173	-.02938	-.03392	-.02880	-.03463	-.03147	-.02186	-.01950

RUN NO. 18/ 0 RN/L = 1.64

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.892	.00382	-.00365	-.00057	-.00324	.00589	-.00603	.00098	.00656	.00232
10.270	15.884	.00257	-.00381	-.00159	-.00440	.00388	-.00722	.00013	.00440	.00100
10.270	19.844	.00311	-.00389	-.00168	-.00434	.00349	-.00711	-.00013	.00441	.00068
10.270	24.137	.00428	-.00197	-.00011	-.00290	.00629	-.00571	.00130	.00595	.00281
10.270	28.093	.00514	-.00094	.00090	-.00187	.00834	-.00507	.00169	.00657	.00371
10.270	31.967	.00718	.00145	.00316	-.00042	.01441	-.00291	.00314	.00869	.00592
10.270	36.137	.00718	.00253	.00384	.00052	.01964	-.00188	.00386	.00857	.00627
10.270	40.165	.01003	.00505	.00571	.00198	.01974	.00029	.00544	.01002	.00906
10.270	42.096	.01145	.00863	.00705	.00218	.00692	.00211	.00620	.00943	.01014

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## OASB TABULATED SOURCE DATA

AMES 3.5-190 OASB (011-M7-M14-N24-DUMY STING)

(REQ020) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1078.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 938.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 35/ 0 RV/L = 1.78

HACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
5.250	11.554	.18208	-.00295	.05925	-.01728	-.00088	.00014	.17832	.09852
5.250	15.663	.30738	-.00297	.05856	-.01808	-.00088	.00015	.28015	.13937
5.250	20.048	.44597	-.00331	.05883	-.01580	-.00093	.00010	.39879	.20814
5.250	24.122	.58803	-.00321	.05942	-.01708	-.00037	.00005	.51240	.29455
5.250	28.403	.75412	-.00333	.06026	-.02129	-.00109	.00002	.63467	.41172
5.250	32.637	.93326	-.00312	.06141	-.02879	-.00122	-.00004	.75278	.55504
5.250	36.889	1.11614	-.00403	.06100	-.03750	-.00158	-.00014	.85632	.71847
5.250	41.120	1.30560	-.00445	.06000	-.04830	-.00171	-.00032	.94410	.90381
5.250	43.219	1.40047	-.00459	.05850	-.05403	-.00171	-.00050	.98052	1.00165

## PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BOFLAP = -11.700 SPOBRK = 85.000  
 RUDDER = .000

AMES 3.5-190 OASB (011-M7-M14-N24-DUMY STING)

(REQ020) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1078.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 938.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 35/ 0 RV/L = 1.78

## PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BOFLAP = -11.700 SPOBRK = 85.000  
 RUDDER = .000

HACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
5.250	11.554	-.02673	-.03265	-.03231	-.03058	.02140	-.03858	-.02810	-.01486	-.01989
5.250	15.663	-.02853	-.03428	-.03406	-.03308	.00135	-.03998	-.02946	-.01870	-.02592
5.250	20.048	-.03078	-.03432	-.03522	-.03538	-.01748	-.04216	-.03118	-.02315	-.02837
5.250	24.122	-.03107	-.03362	-.03517	-.03498	-.02368	-.04215	-.03138	-.02423	-.02941
5.250	28.403	-.03070	-.03458	-.03470	-.03497	-.02172	-.04215	-.03134	-.02411	-.02908
5.250	32.637	-.03058	-.03417	-.03400	-.03495	-.01933	-.04215	-.03124	-.02388	-.02754
5.250	36.889	-.02850	-.03261	-.03223	-.03422	-.02250	-.03936	-.03096	-.02218	-.02711
5.250	41.120	-.02547	-.03149	-.03055	-.03273	-.02634	-.03779	-.03054	-.02061	-.02184
5.250	43.219	-.02470	-.03013	-.02938	-.03202	-.02634	-.03587	-.03031	-.01981	-.01882

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 OF POOR QUALITY

0A98 TABULATED SOURCE DATA

AVES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING) (REQ021) ( 03 AUG 74 )

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YMRP = .0000 IN.YO  
BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000  
BOFLAP = 16.300 SPOBRK = 55.000  
RUDDER = .000

RUN NO. 18/ 0 RN/L = 1.42

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.842	.15516	-.00265	.05452	-.01520	-.00030	.00020	.14067	.09520
10.270	15.859	.26283	-.00300	.05578	-.01598	-.00045	.00005	.23758	.12548
10.270	19.846	.39144	-.00276	.05946	-.02153	-.00035	-.00002	.34801	.18882
10.270	24.111	.54983	-.00286	.06407	-.03257	-.00062	.00005	.47569	.28308
10.270	28.109	.71229	-.00301	.06861	-.04485	-.00065	-.00050	.59595	.39612
10.270	32.011	.87812	-.00271	.07156	-.05790	-.00090	-.00047	.70666	.52616
10.270	36.099	1.05926	-.00208	.07459	-.07738	-.00102	.00020	.81193	.68436
10.270	40.194	1.24699	-.00177	.07586	-.09029	-.00114	.00019	.90356	.86273
10.270	42.157	1.32996	-.00261	.07642	-.09603	-.00118	-.00104	.93462	.94927

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YMRP = .0000 IN.YO  
BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELEVON = .000  
BOFLAP = 16.300 SPOBRK = 55.000  
RUDDER = .000

AVES 3.5-190 0A98 (011-M7-M14-N24-DUMMY STING) (AEQ021) ( 03 AUG 74 )

RUN NO. 18/ 0 RN/L = 1.42

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.842	.00398	-.00372	-.00190	-.00342	.00441	-.00530	.00167	.00832	.00200
10.270	15.859	.00329	-.00390	-.00218	-.00394	.00149	-.00581	.00121	.00675	.00123
10.270	19.846	.00299	-.00373	-.00230	-.00378	.00054	-.00594	.00098	.00711	.00053
10.270	24.111	.00242	-.00281	-.00184	-.00317	.00158	-.00581	.00144	.00788	.00242
10.270	28.109	.00457	-.00098	-.00036	-.00188	.00518	-.00468	.00167	.00876	.00395
10.270	32.011	.00476	.00038	.00071	-.00154	.00878	-.00402	.00239	.01013	.00568
10.270	36.099	.00496	.00147	.00156	-.00034	.01461	-.00172	.00329	.01101	.00624
10.270	40.194	.01278	.00814	.00772	.00633	.01562	.00645	.00960	.01532	.01289
10.270	42.157	.01483	.00910	.00811	.00615	.00619	.00734	.00920	.01437	.01552

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(REQ0022) ( 03 AUG 74 )

AHES 3.5-190 0498 (011-H7-H14-N24-CURRY STING)

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 19/ 0 RN/L = 1.54

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.842	.15015	-.00325	.05339	-.00853	-.00053	.00002	.13600	.08305
10.270	15.873	.25461	-.00334	.05355	-.00494	-.00051	-.00021	.23026	.12115
10.270	19.871	.37718	-.00273	.05553	-.00152	-.00060	-.00010	.33585	.18043
10.270	24.140	.52862	-.00269	.05758	-.00333	-.00078	-.00012	.45884	.26873
10.270	28.138	.68352	-.00261	.05961	-.00660	-.00086	-.00073	.57463	.37492
10.270	32.028	.84721	-.00220	.06081	-.01470	-.00095	-.00031	.68601	.50086
10.270	36.178	1.02739	-.00326	.06125	-.02769	-.00097	-.00058	.79315	.65590
10.270	40.207	1.20025	-.00331	.06073	-.04023	-.00113	-.00052	.87744	.82121
10.270	42.137	1.26670	-.00243	.05942	-.04687	-.00120	-.00030	.91428	.90732

## PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BOFLAP = .000 SPOBRK = 55.000  
 RUDDER = .000

AHES 3.5-190 0498 (011-H7-H14-N24-CURRY STING)

(REQ0022) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 19/ 0 RN/L = 1.54

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.842	.00209	-.00559	-.00388	-.00611	.00042	-.01045	-.00068	.00530	.00034
10.270	15.873	.00111	-.00599	-.00437	-.00670	-.00239	-.01108	-.00151	.00375	-.00042
10.270	19.871	.00073	-.00582	-.00419	-.00687	-.00281	-.01121	-.00134	.00425	-.00062
10.270	24.140	.00073	-.00473	-.00345	-.00567	-.00102	-.01070	-.00050	.00526	.00119
10.270	28.138	.00308	-.00318	-.00192	-.00448	.00230	-.00955	-.00016	.00538	.00278
10.270	32.028	.00474	-.00134	-.00061	-.00353	.00588	-.00815	.00084	.00833	.00493
10.270	36.178	.00601	-.00031	.00059	-.00268	.01210	-.00495	.00195	.00970	.00576
10.270	40.207	.01050	.00388	.00446	.00099	.01168	.00090	.00576	.01208	.01055
10.270	42.137	.01313	.00617	.00638	.00167	.00119	.00140	.00598	.01088	.01269

## PARAMETRIC DATA

BETA = .000 ELEVON = .000  
 BOFLAP = .000 SPOBRK = 55.000  
 RUDDER = .000

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 OF POOR QUALITY



## OASB TABULATED SOURCE DATA

PAGE 33

AHES 3.5-190 OASB (011-H7-H14-N24+DUMMY STING)

(REQ023) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XHRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YHRP = .0000 IN.YO  
BREF = 936.6800 IN. ZHRP = 375.0000 IN.ZO  
SCALE = .0150

## PARAMETRIC DATA

BETA = 5.000 ELEVON = .000  
BOFLAP = -11.700 SPOBRK = 55.000  
RUDDER = .000

RUN NO. 33/ 0 RN/L = 1.50

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.339	.13521	-.04549	.05472	-.00769	-.01076	-.00238	.12181	.08023
10.270	15.444	.23993	-.04374	.05546	-.00088	-.01043	-.00387	.21650	.11736
10.270	19.816	.36939	-.04306	.05736	.00298	-.01045	-.00538	.32807	.17918
10.270	23.731	.50646	-.04206	.05928	.00252	-.01045	-.00708	.43978	.25809
10.270	27.959	.66486	-.04087	.06029	.00089	-.01022	-.00847	.55900	.38496
10.270	32.111	.83968	-.04165	.06127	-.00890	-.00996	-.01049	.67865	.49823
10.270	36.302	1.02583	-.04024	.06171	-.01547	-.01005	-.01084	.79018	.65706
10.270	40.402	1.20927	-.03753	.06080	-.02864	-.01002	-.01111	.88148	.83008
10.270	42.529	1.29199	-.03636	.05936	-.03110	-.00999	-.01200	.91198	.91708

AHES 3.5-190 OASB (011-H7-H14-N24+DUMMY STING)

(AEQ023) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XHRP = 1076.7000 IN.XO  
LREF = 474.8000 IN. YHRP = .0000 IN.YO  
BREF = 936.6800 IN. ZHRP = 375.0000 IN.ZO  
SCALE = .0150

## PARAMETRIC DATA

BETA = 5.000 ELEVON = .000  
BOFLAP = -11.700 SPOBRK = 55.000  
RUDDER = .000

RUN NO. 33/ 0 RN/L = 1.50

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.339	.00708	-.00438	-.00030	-.00093	.00065	-.00487	.00064	.00742	.00256
10.270	15.444	.00649	-.00488	-.00048	-.00194	.00170	-.00696	.00018	.00600	.00137
10.270	19.816	.00613	-.00497	-.00115	-.00206	.00182	-.00737	-.00009	.00594	.00125
10.270	23.731	.00516	-.00392	-.00025	-.00203	.00369	-.00727	.00007	.00653	.00153
10.270	27.959	.00585	-.00279	.00111	-.00126	.00811	-.00498	.00057	.00734	.00291
10.270	32.111	.00486	-.00109	.00278	.00043	.01071	-.00499	.00235	.00801	.00463
10.270	36.302	.00964	.00130	.00448	.00146	.01705	-.00118	.00508	.01014	.00615
10.270	40.402	.01503	.00690	.00958	.00557	.01846	.00266	.00751	.01205	.00916
10.270	42.529	.01528	.00898	.01131	.00603	.01080	.00409	.00849	.01159	.01204

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## OASB TABULATED SOURCE DATA

(REC024) ( 03 AUG 74 )

AMES 3.5-190 OASB (011-M7+M14-N24+DUPHY STING)

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 32/ 0 RN/L = 1.88

MACH	ALPHA	CN	CY	CA	CLM	CYN	CBL	CL	CD
10.270	11.387	.11337	-.04456	.05719	.00497	-.01012	-.00131	.09984	.07845
10.270	15.439	.21176	-.04307	.05734	.01367	-.00993	-.00299	.18885	.11165
10.270	19.812	.33462	-.04140	.05690	.02247	-.01009	-.00405	.29485	.16883
10.270	23.816	.46134	-.04014	.06020	.02908	-.01027	-.00535	.39775	.24138
10.270	27.951	.60594	-.04008	.06248	.03665	-.01043	-.00648	.50597	.33920
10.270	32.065	.76150	-.03846	.06396	.04158	-.01037	-.00723	.61138	.45846
10.270	36.211	.92376	-.03741	.06473	.04373	-.01015	-.00776	.70709	.59795
10.270	40.373	1.08421	-.03738	.06344	.04288	-.00987	-.00890	.78491	.75064
10.270	42.462	1.16497	-.03623	.06265	.04046	-.00966	-.00879	.81714	.83268

## PARAMETRIC DATA

BETA = 5.000 ELEVON = -40.000  
 BOFLAP = -11.700 SPDRK = 55.000  
 RUDDER = .000

AMES 3.5-190 OASB (011-M7+M14-N24+DUPHY STING)

(AEO024) ( 03 AUG 74 )

## REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.XO  
 LREF = 474.8000 IN. YMRP = .0000 IN.YO  
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.ZO  
 SCALE = .0150

RUN NO. 32/ 0 RN/L = 1.88

MACH	ALPHA	CPB1	CPB2	CPB3	CPB4	CPCAV	CPB5	CPV3	CPV2	CPV1
10.270	11.387	.00007	-.00742	-.00358	-.00473	.00033	-.00606	-.00329	.00269	-.00077
10.270	15.439	.00008	-.00777	-.00446	-.00534	.00175	-.00582	-.00386	.00051	-.00270
10.270	19.812	-.00032	-.00778	-.00481	-.00568	.00181	-.00733	-.00414	.00012	-.00278
10.270	23.816	-.00023	-.00637	-.00347	-.00468	.00392	-.00846	-.00332	.00234	-.00176
10.270	27.951	.00026	-.00564	-.00191	-.00332	.00613	-.00608	-.00293	.00265	-.00005
10.270	32.065	.00123	-.00361	-.00113	-.00256	.01155	-.00406	-.00111	.00321	.00023
10.270	36.211	.00308	-.00193	.00144	-.00079	.01648	-.00243	.00049	.00494	.00201
10.270	40.373	.00750	.00100	.00378	.00175	.01842	.00009	.00331	.00791	.00489
10.270	42.462	.00780	.00247	.00478	.00175	.01335	.00287	.00348	.00835	.00613

## PARAMETRIC DATA

BETA = 5.000 ELEVON = -40.000  
 BOFLAP = -11.700 SPDRK = 55.000  
 RUDDER = .000

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